

Receiving Report

Date: 15-06-16

Batch No: B2536

Supplier: East Coast

Dart P/O: 28794

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☒ No ☐
 Receipt: Cash ☐ Cr ☒
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☒ No ☐
 Shipment Complete: Yes ☒ No ☐ N/A ☒
 QC18 Inspection ☐ N/A ☒
 Work Order ☐ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver

QC12



Production/Admin:

Date

Received/Costing

Initial

Location



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28794**

Purchase Order Date 6/11/2015

PO Print Date 6/11/2015

Page Number 1 of 5

Order From : VU-EC001

EAST COAST AVIATION SUPPLIES, INC.
399 EAST DRIVE
MELBOURNE, FLORIDA 32904
USA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 1-321-727-0047
Ship To Contact
Ship To Phone
Ship Via: FedEx Overnight collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency USD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	AN3-35A	Bolt	6/12/2015 Yes 6/12/2015	FN	75.00 Each ✓	\$0.58	\$43.50
Line Total:							\$43.50
2	AN4-51A	Bolt	6/12/2015 Yes 6/12/2015	FN	75.00 Each ✓	\$3.10	\$232.50
Line Total:							\$232.50
3	AN5-32A	Bolt	6/12/2015 Yes 6/12/2015		100.00 Each ✓	\$0.68	\$68.00

6/15-0616

Note:

6/11/2015



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28794**

Purchase Order Date 6/11/2015

PO Print Date 6/11/2015

Page Number 2 of 5

Order From : VU-EC001

EAST COAST AVIATION SUPPLIES, INC.
399 EAST DRIVE
MELBOURNE, FLORIDA 32904
USA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

1-321-727-0047

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Total: \$68.00

4	AN6-12A	Bolt	6/12/2015	FN	75.00	✓	\$0.54	\$40.50
			Yes		Each			
			6/12/2015					

Line Total: \$40.50

5	AN6-13A	BOLT	6/12/2015		25.00	✓	\$0.60	\$15.00
			Yes		Each			
			6/12/2015					

Line Total: \$15.00

6	MS20426AD4-4	Rivet	6/12/2015	FN	3,030.00	✓	\$0.01	\$19.85
			Yes		Each			
			6/12/2015					

Line Total: \$19.85

Note:

Sp 15-06-16

6/11/2015



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28794**

Purchase Order Date 6/11/2015

PO Print Date 6/11/2015

Page Number 3 of 5

Order From : VU-EC001

EAST COAST AVIATION SUPPLIES, INC.
399 EAST DRIVE
MELBOURNE, FLORIDA 32904
USA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 1-321-727-0047

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB FCA - (Free Carrier)

7	MS20426AD4-6	Rivet	6/12/2015 Yes 6/12/2015	FN	1,887.00 Each	✓	\$0.01	\$18.60
Line Total:								\$18.60
8	MS20470AD4-4	Rivet, Universal Head	6/12/2015 Yes 6/12/2015		1,818.00 Each	✓	\$0.01	\$18.85
Line Total:								\$18.85
9	MS20470AD4-7	Rivet, Universal Head	6/12/2015 Yes 6/12/2015		1,348.00 Each	✓	\$0.01	\$16.50
Line Total:								\$16.50
10	MS21043-4	Nut	6/12/2015 Yes 6/12/2015	FN	400.00 Each	✓	\$0.56	\$224.00

Note:

SP 15-06-16.

6/11/2015



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28794**

Purchase Order Date 6/11/2015

PO Print Date 6/11/2015

Page Number 4 of 5

Order From : VU-EC001

EAST COAST AVIATION SUPPLIES, INC.
399 EAST DRIVE
MELBOURNE, FLORIDA 32904
USA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

1-321-727-0047

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Total: \$224.00

11 MS21059L4

Nutplate

6/12/2015

50.00

Yes

Each

6/12/2015

\$0.65

\$32.50

Line Total: \$32.50

12 MS24694-S98

Screw

6/12/2015 FN

100.00

Yes

Each

6/12/2015

\$0.19

\$18.50

Line Total: \$18.50

Note:

6/11/2015



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28794**

Purchase Order Date 6/11/2015

PO Print Date 6/11/2015

Page Number 5 of 5

Order From : VU-EC001

EAST COAST AVIATION SUPPLIES, INC.
399 EAST DRIVE
MELBOURNE, FLORIDA 32904
USA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 1-321-727-0047

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB FCA - (Free Carrier)

13	71401-45	PROCUREMENT QUALITY CLAUSES	6/12/2015	1.00	✓	\$0.00	\$0.00
----	----------	--------------------------------	-----------	------	---	--------	--------

No

Procurement Quality Clauses

6/12/2015

A005 RIGHT OF ENTRY
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT
A033 STATEMENT OF CONFORMITY/TEST RECORDS
FOR NAS, AN and MS FASTENERS
A040 NOTIFICATION OF QUALITY ESCAPE
A041 QUALITY MANAGEMENT SYSTEM
A043 RETENTION OF QUALITY DOCUMENT

8815-06-16

Line Total: \$0.00

PO Total: \$748.30

cy u

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 6/11/2015



ECAS, LLC.
Your World-Class Aerospace & Defense Supplier

Packing Slip

Original

Invoice #: 527334
Date Printed: 6/12/2015
Time: 11:12:05 AM
of Items: 1
Page: 1

To:

DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

ATTN: MICHAEL
Ph: 613.632.9577 Fax: 613.632.1053

Ship To:

DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

Invoice Date: 6/12/2015	Terms: NET 30	Weight: 1	Ship Via: FEDEX INT'L PRIO
Order Date: 6/11/2015	Cust. PO#: PO28794	# of Boxes: 1	
Ship Date: 6/12/2015	FOB: MELBOURNE, FL	Shipment #:	
Sales Order: 473042			
Customer #: 16754	AWB: 6244 7806 9108	ECAS Contact: LUIS	

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	UoM	Total Amt
1	AN3-35A BOLT UNDRILLED	24.00	0.00	NE			

SPS-2016

Authorized Signature:



ECAS, LLC.
Your World-Class Aerospace & Defense Supplier

Invoice

Original

Invoice #: 527334
Date Printed: 6/12/2015
Time: 11:12:00 AM
of Items: 1
Page: 1

To:

DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA
ATTN: MICHAEL

Ship To:

DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

Invoice Date: 6/12/2015

Terms: NET 30

Weight: 1

Ship Via: FEDEX INT'L PRIO

Order Date: 6/11/2015

Cust. PO#: PO28794

of Boxes: 1

Ship Date: 6/12/2015

FOB: MELBOURNE, FL

Shipment #: 1

Sales Order: 473042

Customer #: 16754

AWB: 6244 7806 9108

ECAS Contact: LUIS

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	UoM	Total Amt
1	AN3-35A BOLT UNDRILLED *** Order Complete ***	24.00	0.00	NE	0.5800	EA	\$13.92

SP15-06-16

Authorized Signature:	SubTotal:	\$13.92
	Tax Total:	\$0.00
	Misc Charge:	\$0.00
	Freight:	\$0.00
	Total:	\$13.92
		USD

**ECAS, LLC.**

Your World-Class Aerospace & Defense Supplier

Packing Slip

Original

Invoice #: 527313
Date Printed: 6/11/2015
Time: 3:44:50 PM
of Items: 12
Page: 1**To:**DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADAATTN: MICHAEL
Ph: 613.632.9577 Fax: 613.632.1053**Ship To:**DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

Invoice Date: 6/11/2015

Terms: NET 30

Weight: 29

Ship Via: FEDEX.P1

Order Date: 6/11/2015

Cust. PO#: PO28794

of Boxes: 1

Ship Date: 6/11/2015

FOB: MELBOURNE, FL

Shipment #: 1

Sales Order: 473042

Customer #: 16754

AWB: 6282 2821 5429

ECAS Contact: LUIS SEPULVEDA

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	UoM	Total Amt
	***** ADDITIONAL QTY 24 SHIPPED FROM MELBOURNE FACILITY *****						
✓ 1	AN3-35A BOLT UNDRILLED MFR: AFC LOT: 12895 QTY: 51	51.00	✓ 0.00	NE			
✓ 2	AN4-51A BOLT UNDRILLED MFR: AFC LOT: 14474 QTY: 75	75.00	✓ 0.00	NE			
✓ 3	AN5-32A BOLT UNDRILLED MFR: AFC LOT: 15137 QTY: 100	100.00	✓ 0.00	NE			
✓ 4	AN6-12A BOLT UNDRILLED	75.00	✓ 0.00	NE			

80 15-06-16

Special Instructions:

Authorized Signature:

**ECAS, LLC.**

Your World-Class Aerospace & Defense Supplier

Packing Slip

Original

Invoice #: 527313

Date Printed: 6/11/2015

Time: 3:44:51 PM

of Items: 12

Page: 2

To:DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

ATTN: MICHAEL

Ph: 613.632.9577 Fax: 613.632.1053

Ship To:DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

Invoice Date: 6/11/2015

Terms: NET 30

Weight: 29

Ship Via: FEDEX.P1

Order Date: 6/11/2015

Cust. PO#: PO28794

of Boxes: 1

Ship Date: 6/11/2015

FOB: MELBOURNE, FL

Shipment #: 1

Sales Order: 473042

Customer #: 16754

AWB: 6282 2821 5429

ECAS Contact: LUIS SEPULVEDA

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	UoM	Total Amt
✓ 5	AN6-13A BOLT UNDRILLED MFR: AFC LOT: 23201 QTY: 25	25.00	0.00	NE			
✓ 6	MS20426AD4-4 SOLID RIVET MFR: RISCO LOT: 7245/A QTY: 1	1.00	0.00	NE			
✓ 7	MS20426AD4-6 SOLID RIVET MFR: ALLFAST LOT: S141205015M QTY: 1	1.00	0.00	NE			
✓ 8	MS20470AD4-4 SOLID RIVET MFR: ALLFAST LOT: S140605007L QTY: 1	1.00	0.00	NE			

SP15-06-16

Special Instructions:

Authorized Signature:

**ECAS, LLC.**

Your World-Class Aerospace & Defense Supplier

Packing Slip

Original

Invoice #: 527313

Date Printed: 6/11/2015

Time: 3:44:52 PM

of Items: 12

Page: 3

To:DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

ATTN: MICHAEL

Ph: 613.632.9577 Fax: 613.632.1053

Ship To:DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7
CANADA

Invoice Date: 6/11/2015

Terms: NET 30

Weight: 29

Ship Via: FEDEX.P1

Order Date: 6/11/2015

Cust. PO#: PO28794

of Boxes: 1

Ship Date: 6/11/2015

FOB: MELBOURNE, FL

Shipment #: 1

Sales Order: 473042

Customer #: 16754

AWB: 6282 2821 5429

ECAS Contact: LUIS SEPULVEDA

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	UoM	Total Amt
9	MS20470AD4-7 SOLID RIVET MFR: ALLFAST LOT: S141216011L QTY: 1	1.00	0.00	NE			
10	MS21043-4 SELF LOCKING NUT MFR: PENN ENG. LOT: 408769 QTY: 400	400.00	0.00	NE			
11	MS21059L4 NUTPLATE MFR: PAOLO LOT: 58120 QTY: 50	50.00	0.00	NE			
12	MS24694S98 STRUCTURAL SCREW MFR: _MAC LOT: 65375 QTY: 100	100.00	0.00	NE			

SP-15-06-16

Special Instructions:

Authorized Signature:

Airfasco Industries, c.

2655 Harrison Ave SW
Canton, OH 44706
Ph: 330-430-6190, Fax: 330-430-6199.

Packing Slip

Original

Invoice #: 134785**Invoice Date: 2/26/2013****Time: 11:02:21 AM****Page: 3****To:**

EAST COAST AVIATION SUPPLIES
399 EAST DR
MELBOURNE, FL 32904
USA
ATTN: GARY MIRAGLIA
Ph: 321-727-0047 Fax: 321-727-7331

Ship To:

EAST COAST AVIATION SUPPLIES
399 EAST DR
MELBOURNE, FL 32904

Cust. PO#: 65701**Order Date:** 2/20/2013**Prepared By:****Customer #:** 13570**Buyer:** GARY MIRAGLIA**WO #:****Terms:** NET 30**# of Items:** 10**Sales Order:** 110749**VAT #:****FOB:****Ship Via:** YRC COLLECT**# of Boxes:** 33**Ship Log #:** 1**Cust VAT #:****AWB:****Ship Via Acc:** 2065701**Weight:** 963**Ship Order:****Ship Date:** 2/26/2013**Shipment:**

Item	Part Number/Description	Shipped	BackOrd	CD	List Price	Disc	Unit Price	UOM	Total Amt
	TEST REPORT								
8	AN3-33A BOLT, AN NSN: 5306-00-150-9880 Loc/Whse: D3 2C4CONT Control #: 131996-1 Rev. 1 L-14636 TEST REPORT	500	0	NE				EA	
9	AN3-35A BOLT, AN NSN: 5306-00-151-2153 Loc/Whse: 2B7 2C7 Control #: 130147-1 Rev. 1 L-12895 TEST REPORT	1000	0	NE				EA	
10	AN3-37A BOLT, AN Loc/Whse: 2C1 2A7 2D8 Control #: 8140-2 Rev. 1 L-15268 TEST REPORT	100	0	NE				EA	
	DFAR								

C OF C ENCLOSED
1 PALLET 33 BOXES 963 LBS
PARTS MADE IN THE U.S.A.
THANK YOU!

• CIP

Special Instructions:**Authorized Signature:**

East Coast Aviation Supplies, Inc.

CERTIFICATE OF CONFORMITY

No: 527334

Bill To:

Ship To:

ORIGINAL

DART AEROSPACE LTD. ACCTS. PAYABLE 1270 ABERDEEN STREET HAWKESBURY, ON K6A1K7	DART AEROSPACE LTD. ATTN: RECEIVING 1270 ABERDEEN STREET HAWKESBURY, ON K6A1K7
--	---

Customer PO	Ship Date	Airway Bill Number
PO28794	6/12/2015	6244 7806 9108

Part No.	Description	Cond	Qty	S/L	
AN3-35A MFR: AFC LOT: 12895	BOLT UNDRILLED ECCN#: 9A991 SCHB#: 7318.15.2000	NE	24	9	

CONDITIONS: NE - New NS - New Surplus OH-Overhauled RP-Repaired SV-Serviceable

We hereby certify that the items that are a part of this Purchase Order have been visually & dimensionally found to conform to all applicable standards, drawings & specifications. The liability of ECAS is limited to replacement of any item which is rejected because of a defect in material or workmanship if notified within 30 days & liability shall not exceed the invoice value. Such replacement shall constitute satisfaction of all liability.

Signed:

For and on behalf of EAST COAST AVIATION SUPPLIES, INC.

Inspectors Stamp

Insp.
#2

East Coast Aviation Supplies, Inc.

CERTIFICATE OF CONFORMITY

No: 527313

Bill To:

Ship To:

ORIGINAL

DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7

DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7

Customer PO	Ship Date	Airway Bill Number
PO28794	6/11/2015	6282 2821 5429

Part No.	Description	Cond	Qty	S/L	
AN3-35A	BOLT UNDRILLED	NE	51	11	
MFR: AFC	ECCN#: 9A991				
LOT: 12895	SCHB#: 7318.15.2000				
AN4-51A	BOLT UNDRILLED	NE	75	16	
MFR: AFC	ECCN#: 9A991				
LOT: 14474	SCHB#: 7318.15.2000				
AN5-32A	BOLT UNDRILLED	NE	100	20	
MFR: AFC	ECCN#: 9A991				
LOT: 15137	SCHB#: 7318.15.2000				
AN6-12A	BOLT UNDRILLED	NE	75	16	
MFR: RVT	ECCN#: 9A991				
LOT: 4529	SCHB#: 7318.15.2000				
AN6-13A	BOLT UNDRILLED	NE	25	22	
MFR: AFC	ECCN#: 9A991				
LOT: 23201	SCHB#: 7318.15.2000				
MS20426AD4-4	SOLID RIVET	NE	1	42	
MFR: RISCO	ECCN#: 9A991				
LOT: 7245/A	SCHB#: 7616.10.3000				
MS20426AD4-6	SOLID RIVET	NE	1	38	
MFR: ALLFAST	ECCN#: 9A991				
LOT: S141205015M	SCHB#: 7616.10.3000				

CONDITIONS: NE - New NS - New Surplus OH-Overhauled RP-Repaired SV-Serviceable

We hereby certify that the items that are a part of this Purchase Order have been visually & dimensionally found to conform to all applicable standards, drawings & specifications. The liability of ECAS is limited to replacement of any item which is rejected because of a defect in material or workmanship if notified within 30 days & liability shall not exceed the invoice value. Such replacement shall constitute satisfaction of all liability.

Signed:

For and on behalf of EAST COAST AVIATION SUPPLIES, INC.

Insp.
#2

Inspectors Stamp

East Coast Aviation Supplies, Inc.

CERTIFICATE OF CONFORMITY

No: 527313

Bill To:

Ship To:

ORIGINAL

DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7

DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A1K7

Customer PO	Ship Date	Airway Bill Number
PO28794	6/11/2015	6282 2821 5429

Part No.	Description	Cond	Qty	S/L	
MS20470AD4-4	SOLID RIVET	NE	1	69	
MFR: ALLFAST	ECCN#: 9A991				
LOT: S140605007L	SCHB#: 7616.10.3000				
MS20470AD4-7	SOLID RIVET	NE	1	25	
MFR: ALLFAST	ECCN#: 9A991				
LOT: S141216011L	SCHB#: 7616.10.3000				
MS21043-4	SELF LOCKING NUT	NE	400	34	
MFR: PENN ENG.	ECCN#: 9A991				
LOT: 408769	SCHB#: 7318.16.0060				
MS21059L4	NUTPLATE	NE	50	41	
MFR: PAOLO	ECCN#: 9A991				
LOT: 58120	SCHB#: 7318.16.0030				
MS24694S98	STRUCTURAL SCREW	NE	100	19	
MFR: _MAC	ECCN#: 9A991				
LOT: 65375	SCHB#: 7318.15.4000				

CONDITIONS: NE - New NS - New Surplus OH-Overhauled RP-Repaired SV-Serviceable

We hereby certify that the items that are a part of this Purchase Order have been visually & dimensionally found to conform to all applicable standards, drawings & specifications. The liability of ECAS is limited to replacement of any item which is rejected because of a defect in material or workmanship if notified within 30 days & liability shall not exceed the invoice value. Such replacement shall constitute satisfaction of all liability.

Signed:

For and on behalf of EAST COAST AVIATION SUPPLIES, INC.


Inspectors Stamp

Insp.
#2



**2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199**

EAST COAST AVIATION


WM. DENT

[illegible]



**2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199**

CERTIFICATE OF CONFORMANCE

EAST COAST AVIATION

I Hereby Certify that on 2/21/13 Airfasco Industries provided the supplies called for by Contract/ PO Number 65701 in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7014 ALT 1 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.


WM. DENT

Quality Assurance Representative

[illegible]



AIRFASCO

INDUSTRIES

MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 07/26/07

PART NO.: AN3-35A per NASM3-35A rev. 1

AFC LOT NO.: 12895

QTY MFG.: 64,400

PROCUREMENT SPECIFICATION: Produced per NASM 6812 rev. 2

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: B-135784

PROCUREMENT SPECIFICATION: Heat Treat per MIL-H-6875 H

PLATING

VENDOR: Beringer Plating

CERTIFICATION NO.: 45129

PROCUREMENT SPECIFICATION: Cadmium Plate per QQ-P-416, Type II, Class 2.F

MATERIAL

MILL: Ivaco COUNTRY OF MELT: Canada HEAT: A81379

GRADE SPECIFICATION: Alloy Steel per, AMS6322 K, Type 8740, .218"

8740 MATERIAL CHEMISTRY

ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.400	.790	.004	.004	.240	.440	.470	.208	.150	.044	

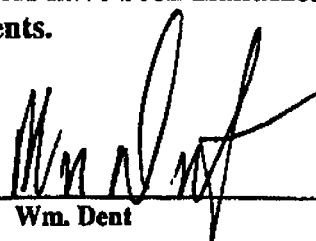
PHYSICAL PROPERTIES

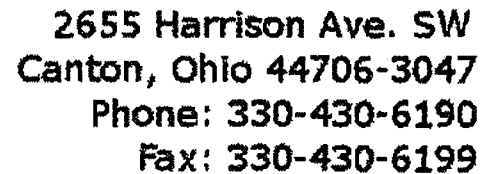
PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	2,210 lbs.	1,690 lbs.	2,125 lbs.	HRC 26-32
ACTUAL	3,212 lbs.	2,701 lbs.	2,457 lbs.	HRC 29-31

Non-Destructive Magnetic Particle per ASTM-E-1444-01

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries
Quality Assurance Representative:


Wm. Dent



EAST COAST AVIATION

Quality Assurance Representative

WM. DENT

[illegible]



AIRFASCO

INDUSTRIES

MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 08/03/07

PART NO.: AN4-51A per NASM4-51A rev. 1

AFC LOT NO.: 14474

QTY MFG.: 19,973

PROCUREMENT SPECIFICATION: Produced per NASM 6812 rev. 2

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: B-135362

PROCUREMENT SPECIFICATION: Heat Treat per MIL-H-6875 H

PLATING

VENDOR: Beringer Plating

CERTIFICATION NO.: 45271

PROCUREMENT SPECIFICATION: Cadmium Plate per QQ-P-416, Type II, Class 2,F

MATERIAL

MILL: Ivaco

COUNTRY OF MELT: Canada

HEAT: A85463

GRADE SPECIFICATION: Alloy Steel per AMS 6300 E, Type 4037, .275"

4037 MATERIAL CHEMISTRY

ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.370	.790	.010	.008	.210	.030	.090	.219	.090	.005	

PHYSICAL PROPERTIES

PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	4,080 lbs.	3,130 lbs.	3,680 lbs.	HRC 26-32
ACTUAL	5,316 lbs.	4,777 lbs.	4,240 lbs.	HRC 29-31

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries

Quality Assurance Representative:


T. West



AIRFASCO
INDUSTRIES
MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

CERTIFICATE OF CONFORMANCE

BILD INDUSTRIES

I Hereby Certify that on 04/11/14 Airfasco Industries provided the supplies called for by Contract/ PO Number 70679 in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7014 ALT 1 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.


WM. DENT

Quality Assurance Representative

PART NUMBER	LOT NUMBER	QUANTITY	PART NUMBER	LOT NUMBER	QUANTITY
ANS-32A	15137	5000			



AIRFASCO

INDUSTRIES

MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 03/14/08

PART NO.: AN5-32A per NASM5-32A rev. 1

AFC LOT NO.: 15137

QTY MFG.: 22,696

PROCUREMENT SPECIFICATION: Produced per NASM 6812 rev. 2

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: B-138764

PROCUREMENT SPECIFICATION: Heat Treat per AMS-H-6875 A

PLATING

VENDOR: Beringer Plating

CERTIFICATION NO.: 48358

PROCUREMENT SPECIFICATION: Cadmium Plate per AMS-QQ-P-416B, Type II, Class 2

MATERIAL

MILL: Republic

COUNTRY OF MELT: USA

HEAT: 7243491

GRADE SPECIFICATION: Alloy Steel per AMS 6300 C, Type 4037, .328"

4037 MATERIAL CHEMISTRY

ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	Other	Other
LADLE	.380	.800	.009	.003	.210	.030	.080	.260	.020		

PHYSICAL PROPERTIES

PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	6,500 lbs.	4,980 lbs.	5,750 lbs.	HRC 26-32
ACTUAL	8,321 lbs.	7,913 lbs.	6,847 lbs.	HRC 29-30

Non-Destructive Magnetic Particle per ASTM-E-1444-01

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries
Quality Assurance Representative:

Wm. Dent

River Valley Tool and Manufacturing, Inc.
260 Airport Road
P.O. Box 64
Paris, AR 72855

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURE'S AFFIDAVIT**

Customer: Bild Industries

Certification Date: 08/28/2013

Customer PO: 80215

Part Number: AN6-12A

Revision: 2

Manufactures Lot Number: 4529

Quantity: 20,631

Country of Origin: United States of America

DFARS 252.225-7014, Alternate 1 Compliant

We certify that the parts furnished against the above referenced purchase order were manufactured by River Valley Tool and Manufacturing, Inc. within the USA, and were processed in conformance with all applicable drawings and specifications.
Objective evidence of compliance is on file, subject to examination upon request.


Quality Assurance Representative

River Valley Tool & Mfg., Inc. is registered to the requirements of ISO9001:2008 and AS9100C
Approval Certificate No. 0063064. SAI GLOBAL

River Valley Tool and Manufacturing, Inc.
260 Airport Road
P.O. Box 64
Paris, AR 72855

HEAT TREAT CERTIFICATION

Customer: Bild Industries

Certification Date: 08/28/2013

Customer PO: 80215

Part Number: AN6-12A

Revision: 2

Manufactures Lot Number: 4529

Quantity: 20,631


Heat Treat Specification as Applicable: MIL-H-6875/AMS2759

Material: 8740

Required Hardness: 26-32 HRC

Actual Hardness: 28-29 HRC

The Fasteners referenced in this report have been processed, inspected, and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment Has been verified in accordance with the applicable procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as the Heat Treat Contractor Certification is on file and subject to examination upon request.


Quality Assurance Representative

River Valley Tool & Mfg., Inc. is registered to the requirements of ISO9100:2008 and AS9100C
Approval Certificate No 0063064. SAI GLOBAL



Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814-532-5680
Fax: 814-532-5684

WORK ORDER
703427

TEST REPORT
LOT NUMBER
K-8192215
SALES ORDER / RLS
001390 / 4

SOLD TO

Mac Fasteners, Inc.
280 Airport Industrial Road
Paris, AR 72855
USA



CUSTOMER P.O. 50516	CUSTOMER PART	QUANTITY 4,437 LBS	COILS 2	LADING NO 00117560	SHIPMENT DATE 05/24/2013							
SPECIFICATION Macfast-87371 AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spheroidize Annealed In Process Heavy Phos & Light Lube Ctd Size: .371 +.001 -.000												
CERTIFICATION REQUIREMENTS												
Chemical												
C .41	Mn .82	P .009	S .014	Si .27	Al .025	Ni .42	Cr .49	Mo .22	Cu .06	V .007		
Co .001	Ti ???????	N .0058	Sn .004									
Physical												
AMS 2301 0000	J1 57	J10 37	J11 35	J12 34	J2 56	J3 56	J5 53	J4 55	J6 49	J7 45	J8 41	J9 39
MacroClean E-361 111												
Mechanical												
TEST	UNITS	HIGH	LOW	AVERAGE								
Tensile Str	Lbs/Sqin	80000	80000	80000								
RA Per Cent	Percent	70.5	70.5	70.5								
Decarb FFD	Inches	.000	.000	.000								
Surface def. depth	Inches	.000	.000	.000								
Rod / Melt Source												
Rod Source Republic	Melt Source Republic	Country of Origin USA	Nafta Yes	Accept S RVT								
End of Certification												

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

Daniel J. Muth
Daniel J. Muth, Director of Quality Assurance



2807 EAST 28TH ST.
PHOENIX, AZ 85016

LOUISVILLE, KY 40005
FAX: 502-438-1699

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/4/2012 6:51:00 AM
PAGE 1 OF 2

PURCHASE ORD: 83165
PART NUMBER: FXT40AA-.438
ORDER NUMBER: 1532908 - 01
HEAT: 8192215
CHARGE ADDRESS: JOHNSTOWN WIRE TECHNOLOGIES
124 LAUREL AVE
JOHNSTOWN, PA 15906

PURCHASE ORDER DATE: 10/2/2012
ACCOUNT NUMBER: 5672-1920-01
SCHEDULE: 6451-92
REVISION: 1
SHIP TO: JOHNSTOWN WIRE TECHNOLOGIES
EDWARD ZAPOLA
124 LAUREL AVE
TRUCK STOP 9 ROD DOCK
JOHNSTOWN, PA 15904

MATERIAL DESCRIPTION
HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RH-100 REVISION DTD 04/21/04 EXC PARA 10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RH-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL 8 6049A & AND 1 COND B-1 EXC MARK & DT WAIVED EF-AISI-8740-H FINE GRAIN VACUUM DEGAUSS AIRCRAFT QUALITY FIXED PRACTICE QUALITY RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
SIZE: RDS .4380 DIAM X COIL
RDS 11.1252MM DIAM X COIL

LADLE CHEMISTRY %							
C	MN	P	S	SI	CU	NI	CR
0.41	0.82	0.009	0.014	0.27	0.06	0.42	0.49
V	MO	SN	AL	B	CA	N	
0.007	0.22	0.004	0.025	0.0001	0.001	0.0058	

REDUCTION RATIO 963.2 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A29.

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
57 56 56 55 53 49 46 41 39 37 35 34 34 32 30 31 30 30 29 29 29 28 28 28

MACRO ETCH TEST ASTM E381/MIL STD 430
ETCHANT: HCL TEMPERATURE: 170
S R C
AVG 1 1 1

MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300
IND AVG IND AVG
FREQ FREQ SEV SEV
PCE 03 0 0 0 0

FINISHED SIZE RESULTS
DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT = NITAL MAGNIFICATION = 100X

	SPIKE	COMPLETE	TOTAL
	INCHES	INCHES	DEPTH
PCE 14230	0.002	0	0.002

CAPABLE OF SEAM DEPTH 14 MAX DIAMETER NOT LESS THAN .005 MAX

G. KRUTH BY DEBORAH STOKES
DIRECTOR QUALITY ASSURANCE

G. Kruth



1807 EAST 28TH RD.
SHOWS: 330-438-5500

LOREAIN, OH 44055
FAX: 330-438-5699

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/4/2012 6:53:00 AM
PAGE 2 OF 2

PURCHASE ORD: 83165
PART NUMBER: FKT40AA-.438
ORDER NUMBER: 1532908 - 01
HEAT: 8192215

PURCHASE ORDER DATE: 10/2/2012
ACCOUNT NUMBER: 5672-1920-01
SCHEDULE: 6451-92
REVISION: 1

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LOREAIN 9/10, U.S.A
MELT METHOD: EF BLOOM RED. RATIO: 863.2

END OF DATA

CC

END OF DATA

WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA

FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA

1-814-532-5684

FILE 1 COPY

G. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

MT Kruth

DE TRAY Plating Works

Specialized Electro-Plating and Polishing
Nickel
Copper
Decorative Chrome
Satin Chrome
Zinc
Cadmium
Passivate
Bright Dip
Strip Copper
Descaling

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail: DeTrayPlating@aol.com

August 23, 2013

River Valley Tool & Mfg.
260 Airport Industrial Road
Paris, AR 72855

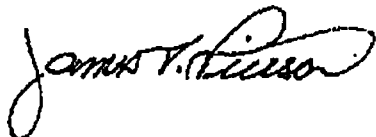
Subject: Certification

This is to certify that the following parts have been cadmium plated per QQ-P-416/AMS-QQ-P-416/NAS4160/AMS2400, Type II, Class 2. Please reference our Invoice #172385 dated 8/23/2013 for:

Lot#- 4529

P.N.- AN6-12A

James T. Pierson, Vice-President



Accept
6
RVT

DE TRAY PLATING WORKS

Please Visit our Web Site : DeTrayPlating.com



**2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199**

CERTIFICATE OF CONFORMANCE

EAST COAST AVIATION

I Hereby Certify that on 02/14/14 Airfasco Industries provided the supplies called for by Contract/ PO Number **70020** in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7009 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.


WM. DENT

Quality Assurance Representative

[illegible]



AIRFASCO

INDUSTRIES

MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 05/31/13

PART NO.: AN6-13A per NASM6-13A rev. 2

AFC LOT NO.: 23201

QTY MFG.: 25,700

PROCUREMENT SPECIFICATION: Produced per NASM 6812

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: 163893

PROCUREMENT SPECIFICATION: Heat Treat per AMS-H-6875 B

PLATING

VENDOR: Beringer Plating

CERTIFICATION NO.: 74642

PROCUREMENT SPECIFICATION: Cadmium Plate per AMS QQ-P-416 C, Type II, Class 2

MATERIAL

MILL: Republic

COUNTRY OF MELT: USA

HEAT: 5170688

GRADE SPECIFICATION: Alloy Steel per AMS 6300 C, Type 4037, .390"

4037 MATERIAL CHEMISTRY											
ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.380	.830	.007	.004	.200	.040	.080	.230	.050	.023	

PHYSICAL PROPERTIES				
PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	10,100 lbs.	7,730 lbs.	8,280 lbs.	HRC 26-32
ACTUAL	13,510 lbs.	12,320 lbs.	8,672 lbs.	HRC 30-31

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries
Quality Assurance Representative:

T. West

RISCO, Incorporated

390 RISCO CIRCLE
BEAUMONT, CA 92223
(951) 769-2899

Certificate of ComplianceCustomer: **ECAS**

Date: 7/11/13

Your Purchase Order: **65129**

Quantity	Part Name	Part Number	DWG	Revision	RISCO Lot #
----------	-----------	-------------	-----	----------	-------------

538#	RIVET	MS20426AD4-4	NASM20426	2	7245/A
------	-------	--------------	-----------	---	--------

Test Description	Specification	Samples	Results	REQUIRED
DOUBLE SHEAR	NASM5674	3	32,200 – 32,900 PSI	26,000 PSI MIN.
DRIVEABILITY	NASM5674	3	ACCEPTABLE	

HEAT TREAT: PER AMS2770 REV. J CONDITION: T4 2117

GRAIN SIZE: FIVE OR FINER

FINISH: MIL-DTL-5541 CLASS 1A GOLD

Raw Material Source	Heat Lot Number	RISCO Wire ALN
BENEKE	848950	AK678

It is hereby certified that the aforementioned materials, or services were produced in accordance with the applicable drawings, specifications, and standards listed in the applicable purchase order or referenced therein through applicable drawings, specifications, and standards.

Please retain this certification for use when referencing these materials in the future: the "**RISCO** Lot Number" will facilitate rapid access to important information such as raw material and special processing.

Detailed inspection and test reports are on file and available for review. Please feel free to call if additional information becomes necessary.

Signed,

Hugo Gomez / Quality Control
RISCO, Inc.

*Remember to retain Lot Numbers for Traceability*

BENEKE

Product Certification And Testing Report

Date >> 3/22/2013

Customer PO No.	BWC Lot No.:	Date Shipped:
13793	23567	3/22/2013
Cust Item ID :		

BWC Item No.
2H1240815604051BWC

Description:
.124" DIA. + - .0005" 2117 - H15 (GRAIN REQUIREMENT)
ALUMINUM COLD HEADING WIRE X 30" ORBITAL 500# COILS
ON WIRE CARRIERS.

Specifications:

FED SPEC

QQ-A-430

REV. C1

Chemical Limits

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
2117	-.8	-.7	2.2 - 3.	-.20	.20 - .5	-.10	-.25	
848950	0.42	0.41	2.9	0.15	0.45	0.06	0.12	

Others
Each

Others
Total

Case No.

Test Results

lbs. DIA (in) Tensile (psi) Yield (psi) Peak Load EL % Grain Size

38933-1	545	0.124	32630	394.0556		7
38933-2	557	0.124	32480	392.2274		7
38933-3	557	0.124	32970	398.1162		7
38933-4	553	0.124	32570	393.332		7
38933-5	553	0.124	32830	396.499		7

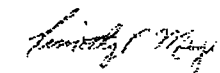
Beneke Wire Company

WE CERTIFY THAT SAMPLES REPRESENTING THE MATERIAL COVERED IN THIS REPORT HAVE BEEN INSPECTED AND FOUND TO MEET THE COMPOSITION LIMITS AND MECHANICAL PROPERTIES SHOWN ABOVE. ANY WARRANTY IS LIMITED TO THAT SHOWN ON BENEKE WIRE COMPANY'S STANDARD TERMS AND CONDITIONS OF SALE.

5540 National Turnpike

Louisville, KY 40214

Authorized
Signature



Timothy P. Meyer, Customer Service Representative

Phone: (502) 367-6434

ALN#
AK678
3/25/13
RISCO, Inc.



Accurate Anodizing Inc.

P.O. Box 5207
1801 W. El Segundo Blvd
Compton, CA 90224
Phone: (310) 637-0349 Fax: (310) 637-6099

Specializing in
MIL-A-8625 Type II and MIL-DTL-5541
ISO 9001:2008 CERTIFIED

Certification/Packing Slip

Date	Invoice #
7/8/2013	60645

Bill To
RISCO, INC. 390 RISCO CIRCLE BEAUMONT, CA 92223

Ship To
RISCO, INC. 390 RISCO CIRCLE BEAUMONT, CA 92223

Ship	P.O. Number	Via	Terms	Due Date
7/8/2013	14424	WILL CALL	NET 30	8/7/2013

Quantity	Units	Description	Misc.
565	LBS	Part: MS20426AD4-4 Lot/WO: 7245/A Containers: 18 Process: Chem-filmed per MIL-DTL-5541F Type 1 Class 1A (Meets and Supersedes MIL-C-5541E Class 1A), Gold Waste Treatment Surcharge	

ACCURATE ANODIZING CERTIFIES THAT THESE PARTS WERE PROCESSED IN ACCORDANCE WITH THE PROCESSES OR SPECIFICATIONS LISTED ABOVE. FINISH REQUIREMENTS, THAT ARE NOT REQUIRED TO BE TESTED DIRECTLY, ARE CONTROLLED THROUGH STATISTICAL MEANS AND MONTHLY TESTING; ACCURATE ANODIZING ASSUMES NO RESPONSIBILITY FOR FAILURES RESULTING FROM NORMAL STATISTICAL VARIATION.

Approved by Quality Assurance:

Received By / Date:

7-10-13





19235 East Walnut Drive
City of Industry, CA 91748
Phone: 626-964-6528 or 714-529-5956 Fax 626-913-1582

CERTIFICATION

ORDER NUMBER

282622

Customer Supplier IDs

Lockheed: PQA586

Boeing: BE10070388

Customer: 9461563

RISCO INC

390 Risco Circle

Beaumont CA, 92223

Shipped To:

RISCO INC

390 Risco Circle

Beaumont CA, 92223

Purchase Order No	Customer Shipper No	Prime	Alloy	Org Cond	Final Temper
14350			2117	H15	T4

Work Performed	Processing Specifications	Material Specifications
Solution Heat Treat to T4	AMS2770J AND CUSTOMER INSTRUCTIONS ON LETTER DECEMBER 15, 2011	

Parts Processed

Line No	Qty	Wt	Part Number	Part Name	Rev	Tot. Weight
1	6	94.167	MS 20426 AD 4-4		2	565.000
LOT 7245/A 6 BSKts 37/12/10/29/36/11 = 565 LBS 3 TEST COUPONS						
Comments						



Specific Operations


Operation	Furn #	Load #	Temp	Soak Time	Cooling-Media	Q-Temp	Q-Delay sec	Date Complete
SOLN H/T	11	589	935°	03:00				06/19/2013
QUENCH					CWATER	84/96	8.30	06/19/2013
PULL TEST								07/02/2013

Test Results

Requirement	Specified	Qty Tested	Test Results	Qty Accepted	Qty Rejected	Date Complete
Hardness						
Conductivity-%IACS						

Comments

 Marilynn Bishop				 7-3-13 Date Signed			This process certification covers thermal processing and/or hardness an/or conductivity testing in accordance with the referenced specifications, and applies to parts in their present condition.	
--	--	--	--	---	--	--	--	--

7-3-13 

CERTIFICATE OF CONFORMANCE

DATE: 01/07/2015

CERTIFICATION NUMBER: 000178616

CUSTOMER NAME: EAST COAST AVIATION SUPPLIES

NOMENCLATURE: Solid Rivet

PURCHASE ORDER: 72890

QUANTITY: 258 LB

PART NUMBER: MS20426AD4-6

REV: 3

SHIPPER NUMBER: 102175184498

LOT CONTROL NUMBER: S141205015M

DATE OF MANUFACTURE: 11/21/2014

MATERIAL LOT NUMBER: S336014

HEAT LOT NUMBER: K853120

MATERIAL VENDOR: KAISER ALUMINUM FAB. PROD. LLC MATERIAL TYPE: 2117-T4

PROCUREMENT SPECIFICATION: NASM5674 REV. 1

SHEAR STRENGTH REQUIRED:	26,000 PSI MIN.		
SHEAR TEST RESULTS:	1: 32,478 PSI	2: 32,628 PSI	
	3: 32,203 PSI	4: 32,582 PSI	5: 32,553 PSI
	6: 32,642 PSI	7: 32,220 PSI	8:
	9:	10:	

DIMENSIONAL INSPECTION

SAMPLE SIZE: 7

RESULTS: ACCEPTABLE

ASTM GRAIN SIZE #: 7.5

DRIVEABILITY: ACCEPTABLE

FINISH: MIL-DTL-5541 REV. F, CLASS 1A, GOLD

COMMENTS:

The undersigned hereby certifies that the product(s) supplied herewith were manufactured and inspected in accordance with all applicable drawings and specifications, and conforms to all applicable government and/or customer requirements. All supporting documentation is on file and is available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.

This certification shall not be reproduced, except in full, without written approval of Allfast Fastening Systems, Inc. Recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Country of origin: USA



Emmanuel E. Hernandez

[Signature]

QUALITY ASSURANCE REPRESENTATIVE

KAISER ALUMINUM S336014

AF 77

AUG 06 2014

SHIP TO:

ALLFAST FASTENING SYS.INC

370 TURNBULL CANYON ROAD


CITY OF INDUSTRY, CA 91745

SOLD TO:

ALLFAST FASTENING SYS. INC

P.O. BOX 3166

CITY OF INDUSTRY, CA 91745-10

Customer PO Number 119095-37		NW WORK ORDER NO. 15463			
DESCRIPTION 1265 2117 H15 30" 800# STEM				AUTHORIZED SIGNATURE QUALITY CONTROL MANAGER	
CUSTOMER PART NO.	ALLOY 2117	TEMPER H15		We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.	
NW PART NO. G12651		DATE SHIPPED 7/16/2014			
WEIGHT SHIPPED 5,968					

		ULTIMATE		YIELD		% ELONGATION	
LOT NUMBER	# OF TESTS	STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K853120	7	32.4	33.3				

COMMENTS:
M-151-4 REV K
QQA-430C
MILL SOURCE KAISER
MADE IN USA
GRAIN SIZE 6 OR FINER

**ALLOY VERIFICATION
HAS BEEN PERFORMED**

AF
77

Grain Size: 7.5

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	2117		0.80		0.70	2.20	3.00		0.20	0.20	0.50		0.10	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
					0.25										
		ALUMINUM REMAINDER													

KAISER ALUMINUM FABRICATED PRODUCTS

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43056-1088
740-522-1151

S336014 (AF 77)

AUG 06 2014

CUSTOMER PO NUMBER: FLO-2395		CUSTOMER PART NUMBER: 6G37L1		PRODUCT DESCRIPTION: ALY-JUMBO	
KAISER ORDER NUMBER: 624564361	LINE ITEM: 1	SHIP DATE: 06/04/2014	ALLOY: 2117	TEMPER: O	
WEIGHT SHIPPED: 42166 lbs.	QUANTITY: 184 pcs.	B/L NUMBER: 1004	DIAM/DAF/THKNS: 0.375 in.	WIDTH: 0.000 in.	LENGTH: 0.0 in.
SHIP TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630			SOLD TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630		

Test Code: 8000

Actual Physical Properties

Lot No.	No. Tests	WGU ksi
853120	3 MIN	21.6
	MAX	22.1
853123	1 MIN	22.3
	MAX	22.3

Chemical Composition, WT. % (Aluminum Remainder)

Lot Cast/Drop ChemID		Si	Fe	Cu	Mn	Mg	Cr	Zn
853120								
99-6F2	Act.	0.42	0.46	2.7	0.13	0.38	0.07	0.10
190220								
853123								
99-7F2	Act.	0.41	0.46	2.9	0.15	0.38	0.07	0.10
190222								
Chemical	Min			2.2		0.20		
Limits	Max	0.8	0.7	3.0	0.20	0.50	0.10	0.25
	Others	Each	0.05	Max		Total	0.15	Max

Specifications

QQA-430

Plant Serial: 36537
Kaiser Order Number: 624564361
Line Item: 1

KAISER ALUMINUM

FABRICATED PRODUCTS

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43058-1088
740-522-1151

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

S336014 (AF 77)

AUG 06 2014

Miscellaneous Notes

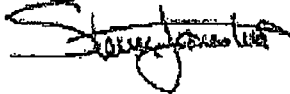
Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager



Plant Serial: 36537

Kaiser Order Number: 624564361

Line Item: 1

ALLFAST

FASTENING SYSTEMS, INC.

P.O.Box 3166 - 15200 Don Julian Road
City Of Industry, California 91745-1098
Phone (626)968-9388 - Fax (626)968-9393
www.allfastinc.com

CERTIFICATE OF CONFORMANCE

DATE: 06/25/2014

CUSTOMER NAME: EAST COAST AVIATION SUPPLIES

PURCHASE ORDER: 71028

PART NUMBER: MS20470AD4-4

REV: 2

LOT CONTROL NUMBER: S140605007L

MATERIAL LOT NUMBER: S317214

MATERIAL VENDOR: KAISER ALUMINUM FAB. PROD. LLC MATERIAL TYPE: 2117-T4

CERTIFICATION NUMBER: 000168658

NOMENCLATURE: Solid Rivet

QUANTITY: 424 LB

SHIPPER NUMBER: 100477180779

DATE OF MANUFACTURE: 05/22/2014

HEAT LOT NUMBER: K852105

PROCUREMENT SPECIFICATION: NASM5674 REV. 1

SHEAR STRENGTH REQUIRED:	26,000 PSI MIN.	
SHEAR TEST RESULTS:	1: 34,361 PSI	2: 33,252 PSI
	3: 32,827 PSI	4: 34,451 PSI
	5: 34,564 PSI	
	6: 35,163 PSI	7: 33,126 PSI
	8: 31,914 PSI	
	9: 35,535 PSI	10: 34,763 PSI

DIMENSIONAL INSPECTION

SAMPLE SIZE: 13

RESULTS: ACCEPTABLE

ASTM GRAIN SIZE #:6

DRIVEABILITY: ACCEPTABLE

FINISH: MIL-DTL-5541 REV. F, CLASS 1A, GOLD

COMMENTS:

The undersigned hereby certifies that the product(s) supplied herewith were manufactured and inspected in accordance with all applicable drawings and specifications, and conforms to all applicable government and/or customer requirements. All supporting documentation is on file and is available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.

This certification shall not be reproduced, except in full, without written approval of Allfast Fastening Systems, Inc. Recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Country of origin: USA


QUALITY ASSURANCE REPRESENTATIVE

Page 1 of 1

MANUFACTURERS OF AIRCRAFT AND COMMERCIAL FASTENERS




5317214

MAR 21 2014



CITY OF INDUSTRY, CA 91745-10

Customer PO Number 119094-21		NW WORK ORDER NO. 14141	
DESCRIPTION .1265 2117 H15 30" 800# STEM			
CUSTOMER PART NO.	ALLOY 2117	TEMPER H15	We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.
NW PART NO. G12651		DATE SHIPPED 2/24/2014	
WEIGHT SHIPPED 5.254			

LOT NUMBER	# OF TESTS	ULTIMATE		YIELD		% ELONGATION	
		STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K852105	7	33.3	34.7				

GRAIN SIZE 6 OR FINER

**ALLOY VERIFICATION
HAS BEEN PERFORMED**

grain size: 6



CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	2117		0.80		0.70	2.20	3.00		0.20	0.20	0.50		0.10	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
				0.25											
ALUMINUM REMAINDER															

KAISER ALUMINUM FABRICATED PRODUCTS

Best in Class

S817214 (AF 92)

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43056-1088
740-522-1151

CUSTOMER PO NUMBER: FLO-2110		CUSTOMER PART NUMBER: 6G37L1		PRODUCT DESCRIPTION: ALY-JUMBO	
KAISER ORDER NUMBER: 624558327	LINE ITEM: 1	SHIP DATE: 11/15/2013	ALLOY: 2117	TEMPER: O	
WEIGHT SHIPPED: 41432 lbs.	QUANTITY: 182 pcs.	B/L NUMBER: 8437	DIAM/DAP/THKNS: 0.375 in.	WIDTH: 0.000 in.	LENGTH: 0.0 in.
SHIP TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630			SOLD TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630		

Test Code: 8000

Actual Physical Properties

Lot No.	No. Tests	WGU ksi
852105	3	MIN 21.9 MAX 22.4
852150	1	MIN 22.0 MAX 22.0

Chemical Composition, WT. % (Aluminum Remainder)

Lot Cast/Drop ChemID		Si	Fe	Cu	Mn	Mg	Cr	Zn
852105								
84-6F2	Act.	0.41	0.40	2.8	0.16	0.41	0.06	0.15
185790								
852150								
84-1F2	Act.	0.39	0.38	2.8	0.12	0.41	0.06	0.20
185759								
Chemical Limits	Min Max			2.2 3.0		0.20 0.50		
		0.8	0.7		0.20		0.10	0.25
	Others	Each	0.05	Max		Total	0.15	Max

Specifications

QQA-430

Plant Serial: 33672
Kaiser Order Number: 624558327
Line Item: 1

KAISER

ALUMINUM

FABRICATED PRODUCTS

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43056-1088
740-522-1151

S317214 
CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

Miscellaneous Notes

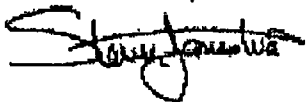
Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager



Plant Serial: 33672
Kaiser Order Number: 624558327
Line Item: 1

ALLFAST

FASTENING SYSTEMS, INC.

P.O.Box 3166 - 15200 Don Julian Road
City Of Industry, California 91745-1098
Phone (626)968-9388 - Fax (626)968-9393
www.allfastinc.com

CERTIFICATE OF CONFORMANCE

DATE: 01/07/2015

CUSTOMER NAME: EAST COAST AVIATION SUPPLIES

PURCHASE ORDER: 73095

PART NUMBER: MS20470AD4-7

REV: 2

LOT CONTROL NUMBER: S141216011L

MATERIAL LOT NUMBER: S336214

MATERIAL VENDOR: KAISER ALUMINUM FAB. PROD. LLC MATERIAL TYPE: 2117-T4

CERTIFICATION NUMBER: 000178609

NOMENCLATURE: Solid Rivet

QUANTITY: 257 LB

SHIPPER NUMBER: 102175184897

DATE OF MANUFACTURE: 12/11/2014

HEAT LOT NUMBER: K853120

PROCUREMENT SPECIFICATION: NASM5674 REV. 1

SHEAR STRENGTH REQUIRED:	26,000 PSI MIN.		
SHEAR TEST RESULTS:	1: 32,057 PSI	2: 32,071 PSI	
	3: 32,482 PSI	4: 32,221 PSI	5: 31,660 PSI
	6:	7:	8:
	9:	10:	

DIMENSIONAL INSPECTION

SAMPLE SIZE: 5

RESULTS: ACCEPTABLE

ASTM GRAIN SIZE #: 7.5

DRIVEABILITY: ACCEPTABLE

FINISH: MIL-DTL-5541 REV. F, CLASS 1A, GOLD

COMMENTS:

The undersigned hereby certifies that the product(s) supplied herewith were manufactured and inspected in accordance with all applicable drawings and specifications, and conforms to all applicable government and/or customer requirements. All supporting documentation is on file and is available for review upon request.

The aforementioned items were manufactured by Allfast Fastening Systems, Inc at 15200 Don Julian Road, City of Industry, California 91745.

This certification shall not be reproduced, except in full, without written approval of Allfast Fastening Systems, Inc. Recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Country of origin: USA

Amor E. D'Amico

QUALITY ASSURANCE REPRESENTATIVE

Page 1 of 1




KAISER ALUMINUM S336214

AF
77

AUG 06 2014

CITY OF INDUSTRY, CA 91745-10

Customer PO Number 119095-37		NW WORK ORDER NO. 15464	
DESCRIPTION .1265 2117 H15 30" 800# STEM			
CUSTOMER PART NO.	ALLOY 2117	TEMPER H15	AUTHORIZED SIGNATURE QUALITY CONTROL MANAGER We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown on this sheet.
NW PART NO. G12651		DATE SHIPPED 7/16/2014	
WEIGHT SHIPPED 6.122			

LOT NUMBER	# OF TESTS	ULTIMATE		YIELD		% ELONGATION	
		STRENGTH K.S.I.		STRENGTH K.S.I.			
		Min	Max	Min	Max		
K853120	7	32.9	34.3				

COMMENTS:
M-161-4 REV K
QQA-430C
MILL SOURCE KAISER
MADE IN USA
GRAIN SIZE 6 OR FINER

ALLOY VERIFICATION
HAS BEEN PERFORMED

AF
77

Grain Size: 7.5

CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		OTHERS	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
	2117		0.80		0.70	2.20	3.00		0.20	0.20	0.50		0.10	0.05	0.15
		NICKEL		ZINC		TITANIUM		LEAD		BISMUTH					
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
				0.25											
ALUMINUM REMAINDER															

KAISER ALUMINUM FABRICATED PRODUCTS

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43058-1088
740-522-1151

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

S336214



AUG 06 2014

CUSTOMER PO NUMBER: FLO-2395		CUSTOMER PART NUMBER: 6G37L1		PRODUCT DESCRIPTION: ALY-JUMBO	
KAISER ORDER NUMBER: 624564361	LINE ITEM: 1	SHIP DATE: 06/04/2014	ALLOY: 2117	TEMPER: O	
WEIGHT SHIPPED: 42166 lbs.	QUANTITY: 184 pcs.	B/L NUMBER: 1004	DIAM/DAF/THKNS: 0.375 in.	WIDTH: 0.000 in.	LENGTH: 0.0 in.
SHIP TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630			SOLD TO: FLORENCE 1547 HELTON DRIVE FLORENCE, AL 35630		

Test Code: 8000

Actual Physical Properties

Lot No.	No. Tests	WGU	ksi
853120	3	MIN	21.6
		MAX	22.1
853123	1	MIN	22.3
		MAX	22.3

Chemical Composition, WT. % (Aluminum Remainder)

Lot	Cast/Drop	ChemID	Si	Fe	Cu	Mn	Mg	Cr	Zn
853120									
99-6F2	Act.		0.42	0.46	2.7	0.13	0.38	0.07	0.10
190220									
853123									
99-7F2	Act.		0.41	0.46	2.9	0.15	0.38	0.07	0.10
190222									
Chemical	Min				2.2		0.20		
Limits	Max		0.8	0.7	3.0	0.20	0.50	0.10	0.25
		Others	Each	0.05	Max		Total	0.15	Max

Specifications

QQA-430

Plant Serial: 36537
Kaiser Order Number: 624564361
Line Item: 1

KAISER ALUMINUM


FABRICATED PRODUCTS

Kaiser Aluminum Fabricated Products, LLC
600 Kaiser Drive
Heath, OH 43056-1088
740-522-1151

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Best in Class

S836214 

AUG 06 2014

Miscellaneous Notes

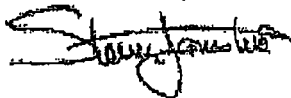
Made in USA

Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. Actual (Act) chemical composition is from representative samples taken during the ingot casting process. Independent chemical analysis will vary from these values because of natural variation in the process and testing error. This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law. Chemical analysis performed in accordance with ASTM E 1251-11. The Newark facility is AS9100C:2009 approved. The Newark Laboratory is NADCAP approved for chemical testing (OES).

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLP ("Kaiser") hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales order acknowledgement form. Any warranty is limited to that shown on Kaiser's standard general terms and conditions.

Steven J. Tua, Technical Manager



Plant Serial: 36537

Kaiser Order Number: 624564361

Line Item: 1



TEST CERTIFICATION

Customer: **East Coast Aviation Supplies, Inc.**
399 East Drive
Melbourne FL 32904

Cert Date: **September 12, 2014**

Lot Number: **408769**

Part Number: **MS21043-4 Rev 3**

PO Number: **70767**

Inspection Lot Size: **74,000**

Quantity Shipped: **50,000**

Part Name: **Nut Self-Locking, Hex 800F**

Order Number: **1556767**

Material Specification: **AMS5731**
Type: **A286**

Procurement Specification: **NASM25027 Rev 1**

Material Producer: **Carpenter Technologies**

Heat Number: **572635**

Cert S/N: **000938072**

Threads conform to AS8879 Rev D Inspected per FED-STD-H28/20 System 22

Magnetic permeability acceptable per ASTM A342 Method 3

Sample FPI per ASTM E 1417 Reference Hadd-Co Inspection Lab Certification No. 26646

Silver Plate per AMS2410 Reference Erie Plating Certification EPCO Work Order Number 809242

Locking Torque Test per NASM 25027 Reference Test Report DQL- 25797

Tensile Test per NASM25027 Reference Test Report DQL- 25797

Wrench Torque per NASM25027 Reference Test Report DQL - 25797

The raw material that was used to manufacture these parts was melted in the USA or a qualifying country and complies with applicable sections of DFARS 252.225.

This test certification shall not be reproduced except in full without written approval of PennEngineering. This certification shall not be used by the customer to claim product endorsement by any agency of the U.S. Government.

PennEngineering certifies that the product shipped on the above purchase order were manufactured, inspected and tested in compliance with all applicable prints and specifications. All supporting documentation is on file at PennEngineering.

Registered ISO 9001:2008, AS9100, QSLM for class 2 and class 3 threaded fasteners - Cage Code 46384

Made in USA.

Clayton Souders
Quality Manager

Penn Engineering®

5190 Old Easton Highway, Danboro, PA 18916
Phone - (215) 766-8853, Fax - (215) 766-7366, Website - www.pennet.com

TEST REPORT

Group No.	Part Number	W/O Number	Remarks:	Test Log No.	DQL	25797
1	MS21043-4	408769		Date:	9/11/2014	
				Req. By.:	Router	
				Job Log No		
Customer			Purpose: MS21043 Requirments: REV 3			

FASTENER and PANEL SPECIFICATIONS

Group	Fastener			Panel			
	Hardness	Plating Thickness	Material	Hardness	Thickness	Mtg. Hole Dia.	Punch/Die/Drilled
1							

TEST EQUIPMENT

Group	Installation Press Type	Punch	Anvil	Mach # / Push-out Bushing Dia.	Axial Tensile Support Dia	Torque Wrench I.D.# / Range	
1					*T5014-112804	7061 / 0-150 in-lbs	
					T5014-113869		
					.2505"-.2545"		

TEST RESULT SUMMARY

Group		Axial Tensile Strength		Wrenching Torque			
		lbs	Hi/Lo	in-lb	Hi/Lo		
1		7246.6 / 6971.7		115 / 115			
NAS Spec.		4580 lbs		115 in-lbs			

Test Methods: NASM25027, NASM1312-8, FTS-501

Threads Gaged: Gage I.D.#: Before Installation?: After Installation?:

Photograph No. Sample Mount No.

Details: PASS - Performance meets specified requirements

*Load rate = 5000 lbs/min

Test Performed By: M. Gontek

Date: 9/11/2014

Test Checked By:

Date:

This report shall not be reproduced except in full. The results relate only to the items tested.

FORM #PE-FORM42 REV.D 11/02/04 ECN# 04-221

Penn Engineering & Manufacturing Corp.
5190 Old Easton Road, PO Box 1000
Danboro, PA 18916

Axial Tensile Test Report (lbs)

Test Log No.: DQL25797
Part No.: MS21043-4
Work Order No.: 408789
Support Diameter: .2505"-.2545"
Material Hardness: N/A
Material Thickness: N/A
Mounting Hole Dia.: N/A

Job Log No.: N/A
Technician: M.Gontek
Test Date: 09/11/2014

Sample No.	Ultimate lbf	Failure Mode
1	7062.8	X
2	7098.9	X
3	7108.4	X
4	7055.6	X
5	6971.7	X
6	7053	X
7	7103.4	X
8	7102.2	X
9	7246.6	X
10	7087.5	X
11	7040.3	X
12	7132.8	X
13	7043.6	X
14	7118.3	X
15	7013.1	X
Average	7082.5	
SD	62.6	
Minimum	6971.7	
Maximum	7246.6	

Failure Mode

X = Test bolt thread tensile failure.

Signed By: 

PFT® FASTENER TEST REPORT

Group # **1**

Test Log #: **DQL** **25787**

Date Completed **9/11/2014**

Failure Modes/Remarks:

D - No permanent deformation to interfere with wrench use.

Wrenching
Torque

in-lb

Results FM

1	115	D
2	115	D
3	115	D
4	115	D
5	115	D
6	115	D
7	115	D
8	115	D
9	115	D
10	115	D
11	115	D
12	115	D
13	115	D
14	115	D
15	115	D
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Results FM

Results FM

Results FM

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

High	115
Low	115
Sample Std. Dev.(s)	0.000
Average (x)	115.00
x - 3s	115.00

64152 64153

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000938072

**CARPENTER**

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

07/21/14

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VENDEUR PAGE 1 OF 2

PENNENGINEERING FASTENING
TECHNOLOGIES

P. O. BOX 1000
DANBORO PA 18916

ALN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
973707	W46229	07/21/14	1734.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE : 572635

PRODUCT DESCRIPTION: A286 ANNEALED COLD FINISH SEAM FREE C HDG CL K2 HVY

CU/SOAP TENSILE MIN 90.0 / MAX 105.0 KSI
PART NUMBER: 330128602820-D

SPECIFICATION: PENNENG 3-30-1286 REV A (08/17/09) EXCPT LTR (06/18/10) PENDING

AMS 5731 REAFFIRMED REV L (07/12) HEADING STK CAP OF
PENNENG QSP 6.5 REV K (10/01/11) EXCPT LTR (11/08/11) APPROVED

SIZE 0.282000 IN. (7.16 MM) RD WIRE INGOT 1

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN (XRF)	SI (XRF)	P (OES)	LT	S (COM)	CR (XRF)
0.02	0.26	0.17	0.017		.0005	13.77
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)		AL (OES)	TI (OES)
24.35	1.19	0.15	0.26		0.12	2.09
V (XRF)	B (OES)					
0.23	0.006					

COUNTRY OF ORIGIN: U.S.A.

MATERIAL MELTED AT THE READING, PA. FACILITY

PROVISIONS OF 10 CFR PART 21 AND 10 CFR PART 50 - APPENDIX B APPLY.

CARPENTER TECHNOLOGY COMPLIES TO THE EUROPEAN DIRECTIVE (EU) 2011/65/EU.

MATERIAL SUPPLIED MEETS THE TECHNICAL REQUIREMENTS OF THE SPECIFICATION(S) NOTED ON THIS ORDER.

THIS HEAT MELTED BY THE ELECTRIC ARC/AOD + VACUUM ARC MELT

TENSILE AS SHIPPED, KSI (MPA) 95.0 (655)

CONTINUED ON NEXT PAGE

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgetragenen Daten oder Zertifizierungsergebnisse.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

W10 408769

MS21043-4

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000938072



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

07/21/14

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VENDEUR PAGE 2 OF 2

PENNENGINEERING FASTENING
TECHNOLOGIES

P. O. BOX 1000
DANBORO PA 18916

ALN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
973707	W46229	07/21/14	1734.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE :

572635

CAPABILITY

1800 F(982 C), 01 HR
1325 F(718 C), 16 HR

OIL TREAT
AIR COOL

HARDNESS

HBW

304

(MIDRADIUS)

COMBINATION STRESS RUPTURE

TEST TEMP 1200 F(649 C)
STRESS, KSI(MPA) 70.0(483)
ELONGATION % 25.7
HOURS 58.2

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST
WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS STRESS KSI(MPA)
48 75.0(517)
56 80.0(552)

(T)RANSVERSE (L)ONGITUDINAL L
YIELD STRENGTH, (0.20 %) KSI(MPA) 108.0(745)
TENSILE STRENGTH, KSI(MPA) 153.0(1055)
ELONGATION IN 2.00", % 25.0
REDUCTION OF AREA, % 52.0

MATERIAL HAS BEEN MELTED AND MANUFACTURED IN THE USA WHICH IS A QUALIFYING
COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING
COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND
252.225-7009.

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS
OPERATIONS QUALITY PROGRAM MANUAL, REVISION 31 DATED 09/03/13.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2013 TO
THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 13-1996R BY PERFORMANCE
REVIEW INSTITUTE. THIS CERTIFICATE OF TEST IS TYPE 3.1 PREPARED IN ACCORDANCE
WITH EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE
IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS,
AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER
ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

TYLER SCHAPPELL
ADMINISTRATOR - QUALITY
CARPENTER TECHNOLOGY CORPORATION

Tyler A Schappell

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den im diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keine Haftung für die angegebenen Daten oder Zertifizierungen.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

w/p 408769

ms21043-4



HADD-CO INSPECTION LAB

2420 Amsler Street, Torrance, CA 90505

Toll Free: (888) 339-8472 Phone: (310) 325-7820 Fax: (310) 325-9655

www.haddco.com Email: NDT@haddco.com

NO. 26646

Sold To:

PENN ENGINEERING
5190 OLD EASTON ROAD
DANBORO, PA 18916

P.O. Number:

889011

Job/Lot #:

408769

Completion Date:

9/8/14

CERTIFICATION

QUANTITY	PART NUMBER	DESCRIPTION
32	MS21043-4	FPI PER ASTM E1417/E1417M-13 NASM25027 TYPE 1 METHOD A LEVEL 3 MATERIAL: CRES NO REJECTS

This is to certify that 100% of the parts under subject purchase order have been inspected by Fluorescent Penetrant Inspection in accordance with all applicable and/or purchase order requirements.

Inspector:

Daniel Vigil
DANIEL VIGIL / LEVEL II



NOTE: Altering of this certification renders it void.

ERIE PLATING CO.

XCELLENCE IN PLATING

CERTIFICATION

9/10/2014

656 WEST 12th STREET
ERIE, PENNSYLVANIA 16501
PHONE (814) 453-7531 FAX (814) 455-9103
E-mail: epco@erieplating.com
Web Site: www.erieplating.com

PENENGINEERING FASTENING TECH
5190 OLD EASTON RD.
DANBORO, PA 18916

Part ID: MS21043-4
Revision:
EPCO Work Order: 809242
Customer PO: 408769
Quantity: 74000.0 Pieces

IT IS HEREBY CERTIFIED THAT ALL the articles mentioned above are in conformance with the requirements, specifications, and drawings as listed on customer work order 408769 issued by PENN ENGINEERING & MFG..

Records substantiating the above are available in our files for inspection by authorized personnel.

SPECIFICATIONS

PEM FIN-16 REV. D / AMS 2410 REV. K
NO STRESS RELIEVE OR BAKE REQUIRED
NICKEL STRIKE
SILVER .0002"/.0003" THK.
COMBINED THICKNESS .00023"/.0003" THK.

By:

Cathy Lucas
Signature

Cathy Lucas
Name

Title:

QA Inspector



Chamber of Commerce



Erie Excellence Council

Highest Achievement Quality Award

OVER
75 Years
OF METAL FINISHING
IN ERIE



TORQUE TEST CERTIFICATION

WORK ORDER:

408769

PART NUMBER:

MS21043-4

THREAD: 250-28 UNJF

LOT SIZE:

73,200

PROCUREMENT SPECIFICATION:
(ATTRIBUTE SAMPLING PLAN)

NASM25027

REVISION: 1

Number of Samples Required: 15

MAXIMUM ON (I) / OFF (R):

30 INCH POUNDS

MINIMUM BREAKAWAY (B):

3.5 INCH POUNDS

DATE TESTED:

9/11/2014

DQL #: 25797

BADGE ID:

625

TEST RESULT: Pass (Pass or Fail)

TEST	FIRST CYCLE			SEVENTH CYCLE			FIFTEENTH CYCLE		
SAMPLE	I	B	R	I	B	R	I	B	R
1	20.5	18.4	18.4	16.7	18.0	19.1	18.1	19.5	20.2
2	15.2	15.9	16.8	15.3	16.8	16.8	12.2	11.6	13.8
3	9.7	8.8	8.8	9.5	11.4	11.4	11.8	10.7	12.0
4	20.7	18.8	18.8	17.5	17.2	17.2	16.7	18.9	22.0
5	16.0	14.9	14.9	15.8	15.7	15.7	14.8	14.7	15.0
6	13.2	11.8	11.8	9.9	10.5	10.5	12.4	11.8	11.8
7	13.6	13.3	13.4	14.3	16.3	16.3	11.0	10.7	12.2
8	19.2	18.6	18.6	17.0	18.8	18.8	22.2	22.6	22.6
9	12.9	12.2	12.2	12.1	14.0	14.0	16.7	17.7	18.3
10	14.0	13.6	15.0	14.5	12.5	13.3	17.4	15.1	15.8
11	15.2	16.5	16.6	9.5	9.8	10.4	9.6	10.9	12.2
12	14.6	12.0	13.6	10.1	9.6	9.6	13.6	12.5	15.1
13	11.0	10.2	10.2	11.8	11.2	11.9	14.0	14.1	16.6
14	13.0	11.0	11.0	12.5	12.6	12.6	11.9	12.7	12.7
15	7.7	10.4	10.4	8.6	8.6	10.9	8.1	8.1	8.9
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									

I = Installation Torque. B = Breakaway Torque. R = Removal Torque.

Data transcribed from original records maintained on file at PennEngineering

**PAOLO ASTORI SPA**

Via Mirabella, 9 - Maggiate Superiore
28013 Gattico (NO) - ITALY
Tel. (+39) 0322 838847
Fax (+39) 0322 880198
Web: www.paoloastori.com

**CERTIFICATE OF CONFORMANCE****N° 8812****Date 24/09/2014** **Pag. 1 / 2****Purchased by:**

AIRCRAFT HARDWARE WEST INC.
2180 TEMPLE AVENUE
LONG BEACH -CA-
USA

Shipped to:

AIRCRAFT HARDWARE WEST INC.
2180 TEMPLE AVENUE

90804 LONG BEACH -CA- US

This is to certify that goods listed below have been inspected in our plant and are up to your orders and to the specifications of the drawings mentioned therein.

Country of origin is ITALY.

Pos.	Part Number	Purchase Order	PO Date	Quantity	U.M.	Batch #	Curo Date Expiry Date
1	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
2	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
3	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
4	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
5	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
6	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
7	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
8	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
9	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
10	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
11	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
12	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
13	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	

Airbus approval # 204788 - BAE Approval # BAE/AG/30631/MAA Complies with DFARS 252.225-7014.
Agusta-Westland Q500 approval # A/0047

All claims regarding the parts in subject must be reported to seller promptly. Credit or replacement of parts may be limited to those parts for which traceability has been maintained by the buyer. The seller manufacturing lot identification number and return authorization (RMA) must accompany all returns. Any discrepancy claimed by the Customer must be made in writing to seller not later than ninety (90) days after the shipping date. The liability of seller on parts found to be defective is limited to replacement or rework of such goods, at seller option, and in no case is to exceed the invoice value of such goods. Under no circumstance will seller be liable for damages or cost incurred by buyer or subsequent user beyond the invoiced value of the parts in subject.

SCANNER**RECEIVED**

**PAOLO ASTORI SPA**

Via Mirabella, 9 - Maggiate Superiore
28013 Gattico (NO) - ITALY
Tel. (+39) 0322 838847
Fax (+39) 0322 880198
Web: www.paoloastori.com

**CERTIFICATE OF CONFORMANCE****N° 8812****Date 24/09/2014****Pag. 2 / 2****Purchased by:**

AIRCRAFT HARDWARE WEST INC.
2180 TEMPLE AVENUE
LONG BEACH -CA-
USA

Shipped to:

AIRCRAFT HARDWARE WEST INC.
2180 TEMPLE AVENUE

90804 LONG BEACH -CA- US

This is to certify that goods listed below have been inspected in our plant and are up to your orders and to the specifications of the drawings mentioned therein.

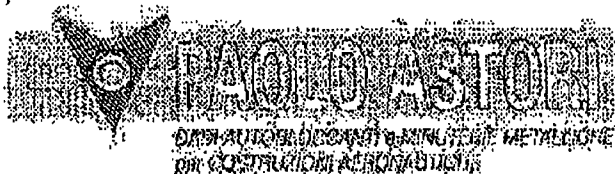
Country of origin is ITALY.

Pos.	Part Number	Purchase Order	PO Date	Quantity	U.M.	Batch #	Cure Date Expiry Date
14	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
15	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
16	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
17	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
18	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
19	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	
20	MS21059L4(Rev. REV2)	20829/1	11/10/2013	2500	N	58120	



Airbus approval # 204788 - BAE Approval # BAE/AG/30631/MSA - Complies with DFARS 252.225-7014.
Agusta-Westland Q500 approval # A/0047

All claims regarding the parts in subject must be reported to seller promptly. Credit or replacement of parts may be limited to those parts for which traceability has been maintained by the buyer. The seller manufacturing lot identification number and return authorization (RMA) must accompany all returns. Any discrepancy claimed by the Customer must be made in writing to seller not later than ninety (90) days after the shipping date. The liability of seller on parts found to be defective is limited to replacement or rework of such goods, at seller option, and in no case is to exceed the invoice value of such goods. Under no circumstance will seller be liable for damages or cost incurred by buyer or subsequent user beyond the invoiced value of the parts in subject.



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9100:2008

Company No. 0120.000.0001.0001
Cott. F. 0120.000.0001.0001
R.E.A. No. 0120.000.0001.0001

PAOLO ASTORI SPA - Via Mirabella, 9
28013 GALLICCO (NO) - ITALY
Tel. +39 0322 838441 - Fax +39 0322 838445
www.paoloastori.com

Certificate of Test

Manufacturer: Paolo Astori spa, Via Mirabella 9, 28013 Gallico (NO), ITALY

Report number: 515
Date performed: 2014-09-05
Inspector: MATTIAS, VALLETTO

Procurement spec: NASM25027
NUT, SELF-LOCKING, 250F, 450F, AND 800F

Part code: 10AD25A407N13
Part number: MS21059L4
Product standard: MS21059 NASM21059
NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, ALLOY STEEL, 1;
Revision level: see certificate of conformity

Batch number: 58120
Batch quantity: 248000
Manufacturing date: 2014-09-04

Additional cross-references: NAS1031A4 / NAS686A4

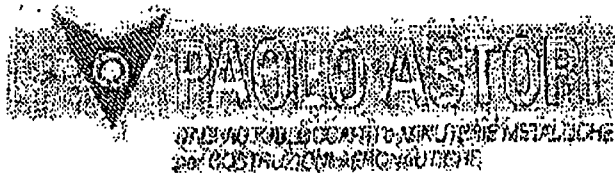
Customer: see certificate of conformity
Purchase order: see certificate of conformity
Quantity delivered: see certificate of conformity

1 Statement of Conformity

This is to certify that parts have been produced, controlled and quality assured according to the requirements of the applicable specification requested by the purchase order and/or the applicable standard drawing. Material, heat and surface treatments and manufacturing processes are the same as those used for the qualification approval. Samples for testing have been randomly selected from the production batch covered by this document. Country of origin is Italy. Unless otherwise stated, all special processes have been undertaken by Paolo Astori. This report shall not be reproduced except in full, without the written approval of Paolo Astori spa.

2 Disclaimer

All claims regarding the parts in subject must be reported to seller promptly. Credit or replacement of parts may be limited to those parts for which traceability has been maintained by the buyer. The seller's manufacturing lot identification number and return authorization (RMA) must accompany all returns. Any discrepancy claimed by the Customer must be made in writing to seller not later than ninety (90) days after the shipping date. The liability of seller on parts found to be defective is limited to replacement or rework of such goods, at seller option, and in no case is to exceed the invoiced value of such goods. Under no circumstances will seller be liable for damages or costs incurred by buyer or subsequent user beyond the invoice value of the parts in subject.



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
EN 9100:2003

Creazione del file 12/08/2017 ore 10:00
Data File: 12/08/2017 ore 10:00
File: 12/08/2017 ore 10:00

PACIO ASTORI SpA - Via Mirabella, 9
20013 MAGGIATE E.R.P. - (MI) - ITALIA
Tel. +39 0322 836647 - Fax +39 0322 836199
www.pacioastori.com

3 Components and raw materials

Component name	Component batch	Material batch	Heath	Material spec
BASKET	54052	-3080	000B1669	SAE1042 (MEQU13/01C)
NUT	58119	-3029	00001362	SAE1042 (MEQU13/01C)

4 Special processes

Component name	Process	Specification
BASKET	CAD PLATING	AMS:QQ-P-416C
BASKET	LUBRICATION	NASM25027/NAS3356
NUT	CAD PLATING	AMS:QQ-P-416C
NUT	LUBRICATION	NASM25027/NAS3356

5 Hardness

Component name	min hardness	max hardness	avg hardness
BASKET	78.30 HR15N	80.00 HR15N	79.25 HR15N
NUT	79.90 HR15N	81.80 HR15N	80.90 HR15N

6 Final Inspection measurements

6.1 SELF LOCKING DEVICE EXAMINATION

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK								

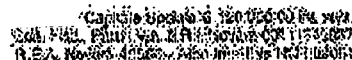
Number of samples tested: 32

6.2 THREAD FIT

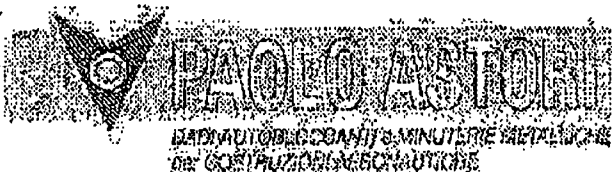
Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK							

Number of samples tested: 13



	Min	Max	Avg
Allowed:	25.35 (0.9980)	25.45 (1.0020)	
Found:	25.39 (0.9996)	25.40 (1.0000)	25.40 (0.9998)



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
EN 9100:2003

Capitale Sociale di 1.500.000.000,00
Sede Sociale: 33010 S. Vito al Tagliamento (TV) - Italy
R.E.C. N. 0225/006637 - P.A. N. 0225/006637

PAOLO ASTORI SpA - Via 48esima, 5
33013 MAGGIATE SUD - GORIZIO (NO) - ITALY
Tel. +39 0422 896837 - Fax +39 0422 890190
www.paoloastori.com

6.6 HEIGHT OF NUT

Unit of measure: mm (Inch)

7.10 (0.2795)	7.09 (0.2791)	7.06 (0.2780)	7.06 (0.2780)	7.07 (0.2783)
7.09 (0.2791)	7.06 (0.2780)	7.08 (0.2787)	7.09 (0.2791)	7.07 (0.2783)
7.09 (0.2791)	7.09 (0.2791)	7.08 (0.2787)		

Number of samples tested: 13

	Min	Max	Avg
Allowed:	- (-)	7.13 (0.2807)	
Found:	7.06 (0.2780)	7.10 (0.2795)	7.08 (0.2787)

6.7 LOOSE OR HANGING BURRS

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK							

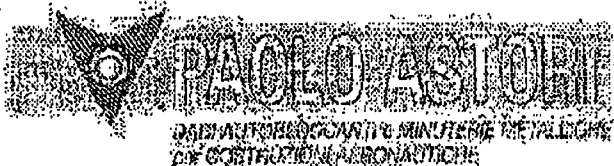
Number of samples tested: 13

6.8 ALL OTHER DIMENSIONAL CHARACTERISTICS NOT COVERED

Unit of measure: ATTR

OK	OK	OK	OK	OK
----	----	----	----	----

Number of samples tested: 5



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
EN 9100:2003

Calculated by: 12/02/2003
Rev. 1.01, 12/02/2003
Rev. 1.02, 12/02/2003

PAOLO ASTORI SpA - Via Mirafiori, 9
28013 MAGGIATE S.P.A. (VA) ITALY
Tel. +39 0322 880442 - Fax +39 0322 880448
www.paoloastori.com

6.9 AXIAL TENSILE STRENGTH

Unit of measure: N (lbf)

22150.00 (4979.5181)	21400.00 (4810.9114)	21750.00 (4889.5945)	22050.00 (4957.0372)	21600.00 (4855.8732)
21950.00 (4934.5563)	21750.00 (4889.5945)	21850.00 (4912.0754)	22050.00 (4957.0372)	22100.00 (4968.2776)
21500.00 (4833.3923)	21900.00 (4923.3159)	21950.00 (4934.5563)	22050.00 (4957.0372)	22100.00 (4968.2776)
21800.00 (4900.8350)	21750.00 (4889.5945)	21650.00 (4867.1136)	21550.00 (4844.6327)	22050.00 (4957.0372)
22100.00 (4968.2776)	22150.00 (4979.5181)	21550.00 (4844.6327)	21650.00 (4867.1136)	21750.00 (4889.5945)
21800.00 (4900.8350)	21950.00 (4934.5563)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	20380.00 (4581.6063)	- (-)	
Found:	21400.00 (4810.9114)	22150.00 (4979.5181)	21848.15 (4911.6591)

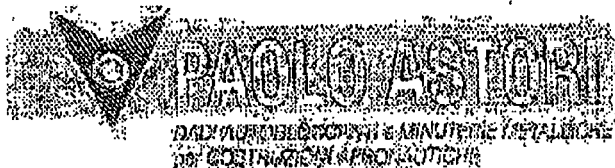
6.10 MAX LOCKING TORQUE 1st CYCLE

Unit of measure: Nm (lbf-in)

2.30 (20.3567)	2.40 (21.2418)	2.50 (22.1269)	2.40 (21.2418)	2.22 (19.6487)
2.40 (21.2418)	2.36 (20.8878)	2.31 (20.4452)	2.22 (19.6487)	2.24 (19.8257)
2.49 (22.0384)	2.22 (19.6487)	2.32 (20.5337)	2.28 (20.1797)	2.41 (21.3303)
2.36 (20.8878)	2.45 (21.6843)	2.48 (21.9498)	2.35 (20.7993)	2.22 (19.6487)
2.24 (19.8257)	2.30 (20.3567)	2.35 (20.7993)	2.36 (20.8878)	2.40 (21.2418)
2.33 (20.6222)	2.37 (20.9763)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	- (-)	3.39 (30.0040)	
Found:	2.22 (19.6487)	2.50 (22.1269)	2.34 (20.7435)



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY ISO 9001:2008

Capitale Sociale: 120.000.000,00 Euro
Sede: P.le. E. Mattei, 1/A - 00144 Roma (RM) - Italia
R.E.A. Roma: 40567 - P.IVA: 01210015057

PADO ASTORI SpA - Via V. Veneto, 6
28013 INAGGIATE SLP - (VA) - ITALY
Tel. +39 0322 893147 - Fax +39 0322 893188
www.padoastori.com

6.11 MAX LOCKING TORQUE 7th CYCLE

Unit of measure: Nm (lbf-in)

1.50 (13.2761)	1.60 (14.1612)	1.70 (15.0463)	1.60 (14.1612)	1.58 (13.9842)
1.54 (13.6301)	1.58 (13.9842)	1.46 (12.9221)	1.53 (13.5416)	1.51 (13.3646)
1.54 (13.6301)	1.41 (12.4796)	1.58 (13.9842)	1.71 (15.1348)	1.46 (12.9221)
1.48 (13.0991)	1.42 (12.5681)	1.64 (14.5152)	1.44 (12.7451)	1.66 (14.6922)
1.62 (14.3382)	1.48 (13.0991)	1.61 (14.2497)	1.60 (14.1612)	1.44 (12.7451)
1.66 (14.6922)	1.53 (13.5416)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	-	3.39 (30.0040)	
Found:	1.41 (12.4796)	1.71 (15.1348)	1.55 (13.7285)

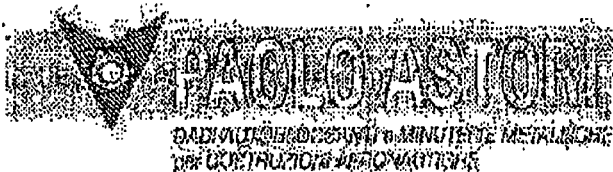
6.12 MAX LOCKING TORQUE 15th CYCLE

Unit of measure: Nm (lbf-in)

0.94 (8.3197)	0.96 (8.4967)	0.98 (8.6737)	0.96 (8.4967)	0.96 (8.4967)	0.93 (8.2312)	0.96 (8.4967)	0.98 (8.6737)	0.97 (8.5852)	0.95 (8.4082)
0.94 (8.3197)	0.95 (8.4082)	0.94 (8.3197)	0.98 (8.6737)	0.97 (8.5852)	0.96 (8.4967)	0.97 (8.5852)	0.95 (8.4082)	0.97 (8.5852)	0.95 (8.4082)
0.97 (8.5852)	0.93 (8.2312)	0.94 (8.3197)	0.94 (8.3197)	0.97 (8.5852)	0.93 (8.2312)	0.92 (8.1427)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	-	3.39 (30.0040)	
Found:	0.92 (8.1427)	0.98 (8.6737)	0.95 (8.4475)



COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY ISO 9001:2008

Capitale Sociale € 120.000.000
Cod. Fis. 01111111111
R.E.A. N. 01111111111

PAOLO ASTORI SpA - Via Miraballo, 8
29013 MAGGIATE S.P. - GATTICO (PC) - ITALY
Tel. +39 0522 938847 - Fax +39 0522 938195
www.paoloastori.com

6.13 MIN.BREAKAWAY TORQUE 1st CYCLE

Unit of measure: Nm (lbf-in)

2.10 (18.5866)	2.20 (19.4716)	2.30 (20.3567)	2.20 (19.4716)	2.04 (18.0555)
2.31 (20.4452)	2.20 (19.4716)	2.20 (19.4716)	2.09 (18.4981)	2.19 (19.3831)
2.27 (20.0912)	2.11 (18.6751)	2.21 (19.5601)	2.27 (20.0912)	2.01 (17.7900)
2.23 (19.7372)	2.26 (20.0027)	2.07 (18.3210)	2.14 (18.9406)	2.24 (19.8257)
2.17 (19.2061)	2.05 (18.1440)	2.02 (17.8785)	2.20 (19.4716)	2.09 (18.4981)
2.21 (19.5601)	2.09 (18.4981)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	0.40 (3.5403)	- (-)	
Found:	2.01 (17.7900)	2.31 (20.4452)	2.17 (19.1668)

6.14 MIN.BREAKAWAY TORQUE 7th CYCLE

Unit of measure: Nm (lbf-in)

1.40 (12.3910)	1.50 (13.2761)	1.60 (14.1612)	1.50 (13.2761)	1.39 (12.3025)
1.41 (12.4796)	1.57 (13.8957)	1.57 (13.8957)	1.52 (13.4531)	1.51 (13.3646)
1.36 (12.0370)	1.55 (13.7187)	1.46 (12.9221)	1.50 (13.2761)	1.38 (12.2140)
1.57 (13.8957)	1.33 (11.7715)	1.48 (13.0991)	1.60 (14.1612)	1.58 (13.9842)
1.43 (12.6566)	1.50 (13.2761)	1.37 (12.1255)	1.45 (12.8336)	1.61 (14.2497)
1.50 (13.2761)	1.33 (11.7715)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	0.40 (3.5403)	- (-)	
Found:	1.33 (11.7715)	1.61 (14.2497)	1.48 (13.1024)

PAOLO ASTORI SPA - Via Mazzini, 9
20019 MAGGIATE SUR (GALLARATE) - ITALY
Tel. +39 0332 830447 - Fax +39 0332 880100
www.paolastori.com

6.15 MIN.BREAKAWAY TORQUE 15th CYCLE

Unit of measure: Nm (lbf-in)

0.88 (7.7887)	0.90 (7.9657)	0.92 (8.1427)	0.90 (7.9657)	0.86 (7.6116)	0.86 (7.6116)	0.92 (8.1427)	0.87 (7.7001)	0.92 (8.1427)	0.86 (7.6116)
0.87 (7.7001)	0.89 (7.8772)	0.92 (8.1427)	0.90 (7.9657)	0.90 (7.9657)	0.89 (7.8772)	0.89 (7.8772)	0.87 (7.7001)	0.92 (8.1427)	0.89 (7.8772)
0.89 (7.8772)	0.92 (8.1427)	0.87 (7.7001)	0.91 (8.0542)	0.92 (8.1427)	0.91 (8.0542)	0.91 (8.0542)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	0.40 (3.5403)	- (-)	
Found:	0.86 (7.6116)	0.92 (8.1427)	0.89 (7.9198)

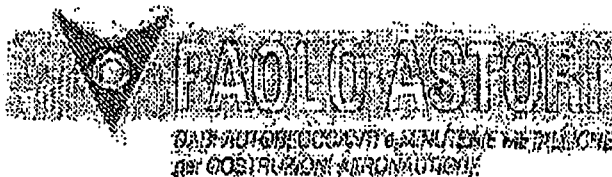
6.16 TORQUE-OUT

Unit of measure: Nm (lbf-in)

12.00 (106.2089)	11.80 (104.4388)	11.80 (104.4388)	12.00 (106.2089)	12.00 (106.2089)
12.00 (106.2089)	11.80 (104.4388)	11.60 (102.6687)	11.50 (101.7836)	11.80 (104.4388)
12.00 (106.2089)	12.00 (106.2089)	12.00 (106.2089)	12.00 (106.2089)	11.80 (104.4388)
11.80 (104.4388)	11.80 (104.4388)	11.80 (104.4388)	12.00 (106.2089)	12.00 (106.2089)
12.00 (106.2089)	12.00 (106.2089)	12.00 (106.2089)	11.80 (104.4388)	11.60 (102.6687)
11.80 (104.4388)	12.00 (106.2089)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	11.30 (100.0134)	- (-)	
Found:	11.50 (101.7836)	12.00 (106.2089)	11.88 (105.1272)



COMPANY WITH QUALITY MANAGEMENT
 SYSTEM CERTIFIED BY UNI EN ISO 9001:2008

Capital: Euro 6.100.000,00
 R.E.A. Roma 245567 - S. Soc. Imp. 4574510001

PAOLO ASTORI S.p.A. - Via Maresca, 9
 28013 MAGGIATE SUR - GATICO (NO) - ITALY
 Tel. +39 0322 838842 - Fax +39 0322 880198
 www.paolastori.com

6.17 PUSH-OUT

Unit of measure: N (lbf)

588.00 (132.1877)	579.00 (130.1644)	569.00 (127.9163)	588.00 (132.1877)	588.00 (132.1877)
588.00 (132.1877)	588.00 (132.1877)	579.00 (130.1644)	579.00 (130.1644)	588.00 (132.1877)
579.00 (130.1644)	569.00 (127.9163)	579.00 (130.1644)	588.00 (132.1877)	588.00 (132.1877)
588.00 (132.1877)	588.00 (132.1877)	588.00 (132.1877)	588.00 (132.1877)	588.00 (132.1877)
579.00 (130.1644)	588.00 (132.1877)	579.00 (130.1644)	588.00 (132.1877)	579.00 (130.1644)
579.00 (130.1644)	588.00 (132.1877)			

Number of samples tested: 27

	Min	Max	Avg
Allowed:	556.00 (124.9938)	- (-)	
Found:	569.00 (127.9163)	588.00 (132.1877)	583.59 (131.1968)

6.18 DISCONTINUITIES

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	OK								

Number of samples tested: 32

6.19 23-HOURS STRESS EMBRITTMENT

Unit of measure: ATTR

OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
----	----	----	----	----	----	----	----	----	----

Number of samples tested: 10



**SALZGITTER
FLACHSTAHL**

Ein Unternehmen der Salzgitter Gruppe

Test report 2.2		No. (A07)	1088579	
DIN EN 10204		Page	1/1	
(A02)		Date	21.05.2012	
No. (A07)	32/90/000160	03.02.2012	No. (A07)	32/90/000160
Purchaser	Guiseppo & Frat. Bonaiti SpA	Customer	Guiseppo & Frat. Bonaiti SpA	
(A08)	23081 CALOLZIOCORTE (LC)	(A08)	23081 CALOLZIOCORTE (LC)	
	ITALIEN		ITALIEN	
Product	Hot rolled wide strip	Works order No.	0001164101	
(B01)		(A09)		
Steel grade and terms of delivery	C 45	Dispatch note No.	0083730467	
(B02-B03)	DIN EN 10083 T.2/10.2006		19.05.2012	
	CHI/2451 Rev.3-15.06.11	Inspection	WS	
	DIN EN 10051:2011-02	(A05)		
	1			

Material data (B01-B20)

Item	Quantity	Product No.	Heat No.	Cond. of delivery	Thickness x Width	mm x mm
(B04)	(B04)	(B07)	(B07)	(B04)	(B09-B11)	
01	3		000B1669	U	2,00 x 1300,0	
Σ	3	Weight	70.200	kg	U: as rolled	
		(B12)				

Ladle analysis (C70-C80)

Heat No.	C	Si	Mn	P	S	Ni	Al	Cu	Cr	Mo
(B07)	%	%	%	%	%	%	%	%	%	%
	0,42 - 0,47	≤0,40	0,30 - 0,60	≤0,045	≤0,003				≤0,08	
000B1669	0,463	0,242	0,663	0,008	0,003	0,055	0,032	0,026	0,249	0,007
Heat No.	V									
(B07)	%									
000B1669	0,003									

Steel making: Basic oxygen process
(C70)

Our products are free of radioactive substances and do not exceed the clearing limit value of 100 Bq/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.

CON

We hereby certify that the delivered material complies with the terms of the order.
(C20)

Trademark
(A04)

Salzgitter Flachstahl GmbH
Eisenhüttenstr. 99
D-36288 Salzgitter
(A01)

Inspection Representative
(C20)

Kratz

This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.



GIUSEPPE & F.lli BONAITI S.p.A.

NASTRO E FILO DI ACCIAIO

Piazza Verdi, 3/A
23901 CALOLZIOCORTE (LC)
tel. 0341 633080 fax 0341 633081
internet: www.bonaitigiuseppa.it
e-mail: info@bonaitigiuseppa.it

CERTIFICATO DI CONTROLLO

(Tipo 3.1 secondo norma EN 10204:2004)

Nr
6460

del
14/06/13

Spett.

PAOLO ASTORI SPA
VIA MIRABELLA 9
28013 MAGGIATE SUPERIORE NO

Vs. Ord. 21796 del 21/11/12

Ns. Con. 32/002219-02 del 21/11/12

DDT N. **2829** del **14.6.13**

PRODOTTO Cod.

NASTRO C45E SAE1042 MM. 25,0X1,00

PAOLO ASTORI SPA

-3029

RISULTATI PROVE

RAW MATERIAL LOT

FOGLIO DI LAVORAZIONE

FOL LA 2013 000080

Documento N. 12189 del 18/02/13

Prova

RESISTENZA A TRAZIONE N/MM2 475

ALLUNGAMENTO % A80MM. 28,50

CARICO UNIT. SCOST. PROP. RPO.2 333,00

PIEGAMENTO TRASVERSALE 180° NO ROTTURA

Prova

RESISTENZA A TRAZIONE N/MM2 486

ALLUNGAMENTO % A80MM. 26,97

CARICO UNIT. SCOST. PROP. RPO.2 347,00

PIEGAMENTO TRASVERSALE 180° NO ROTTURA

Certifichiamo che il prodotto è conforme alle richieste della conferma d'ordine.

LABORATORIO PROVE

L. Panzeri

ANALISI COLATA

(Verifica effettuata dal fornitore materia prima)

Colata 00001362

L. 40647 / 001. E

C	Mn	Si	P	S	Al	Cr	Cu	Ni	Mo	V
0,460	0,580	0,190	0,007	0,002	0,010	0,170	0,020	0,040	0,003	0,003



**SALZGITTER
FLACHSTAHL**

Ein Unternehmen der Salzgitter Gruppe

Test report 2.2 DIN EN 10204 (A01)		No. (A01) 1088584 Page 1/1 Date	
No. (A01) 32/90/000163 Purchaser Giuseppe & Frat. Bonaiti SpA (A01) 23081 CALOLEUCORTE (LC) ITALIEN	04.02.2012 No. (A01) 32/90/000163 Customer Giuseppe & Frat. Bonaiti SpA (A01) 23081 CALOLEUCORTE (LC) ITALIEN		
Product Hot rolled wide strip (B01)		Works order No. (A01) Dispatch note No.	
Steel grade and temp. of delivery C 45 (B02-B03) DIN EN 10083 T.2/10.2006 CHI/2451 Rev.3-15.05.11 DIN EN 10051:2011-02 1		Inspection (A05)	

Material data (B04-B05)						
Item	Quantity (B04)	Product No. (B05)	Heat No. (B06)	Cond. of delivery (B07)	Thickness x Width (B08-B10)	mm x mm
D1	2		00001362	U	3,00 x 1300,0	
Σ	2	Weight (B11)	52.840 kg	U: certified		

Ladle analysis (C70-C85)										
Heat No. (B07)	C %	Si %	Mn %	P %	S %	Ni %	Al %	Cu %	Cr %	Mo %
00001362	0,460	0,190	0,580	0,007	0,002	0,040	0,010	0,020	0,170	0,003
Heat No. (B07)	V %									
00001362	0,003									
Steel making: Basic oxygen process (C70)										

Our products are free of radioactive substances and do not exceed the clearing limit value of 100 Bq/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.

We hereby certify that the delivered material conforms with the terms of the order.
(Z01)

Trademark
(A04)

Salzgitter Flachstahl GmbH
Flachstahlwerk 99
0-38223 Salzgitter
(A01)

Inspection Representative
(Z02)

Kratz

This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: BILD INDUSTRIES

PO: 80580

PART NUMBER: MS24694-S98

REV: 2

LOT NUMBER: 65375

MANUFACTURED QUANTITY: 30,000

MILL HEAT NUMBER: 8192216

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 08/12/13


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company- SAI GLOBAL - 0058029

CHEMICAL & PHYSICAL TEST REPORT

MATERIAL				MATERIAL SPECIFICATION				MILL HEAT NUMBER			SUPPLIER		
TYPE 8740				MIL-S-8049/AMS6322				8192216			JOHNSTOWN		
C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	B	Fe	Al	Ti
.41	.24	.84	.007	.010	.05	.42	.48	.22	.003			.024	
	Co	N	Bi	Pb	Mg	Zn		Nb	Sn			Other	
		.0051							.004				

HARDNESS	
ROCKWELL "C" SCALE	
REQ.	28 - 32 HRC
SAMPLE SIZE	8
ACTUAL RESULTS	
29-30 HRC	

METALLURGICAL EXAMINATION			
Discontinuities	<input checked="" type="checkbox"/>	Carb/Decarb	<input checked="" type="checkbox"/>
Grain Flow	<input checked="" type="checkbox"/>	Microstructure	<input checked="" type="checkbox"/>
Grain Size	<input checked="" type="checkbox"/>	Appearance	<input checked="" type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3		System <input type="checkbox"/> 21	System <input checked="" type="checkbox"/> 22
			System <input type="checkbox"/> 23

NDT/ ADDITIONAL TESTS	
Magnetic Particle Inspection per ASTM E1444	<input checked="" type="checkbox"/>
Liquid Penetrant Inspection per ASTM E1417	<input type="checkbox"/>
Recess Torque Test	<input type="checkbox"/>
Head Marking	<input checked="" type="checkbox"/>

AS9100C REGISTERED
SAI GLOBAL - 0058029

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

HEAT TREAT CERTIFICATION

CUSTOMER: BILD INDUSTRIES

DATE: 06/12/13

PO NUMBER: 80580

MANUFACTURED QUANTITY: 30,000

LOT NUMBER: 65375

MATERIAL: TYPE 8740

PART NUMBER: MS24694-S98

REVISION: 2

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 8

HARDNESS: 29-30 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.



QUALITY ASSURANCE REPRESENTATIVE



Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814-532-5680
Fax: 814-532-5684

WORK ORDER
623118

TEST REPORT

LOT NUMBER
K-8192216
SALES ORDER / RLS
000823 / 3

SOLD TO

Mac Fasteners, Inc.
C/O TD Logistics Inc.
14505 W 100th Street
Lenexa, KS 66215
USA



CUSTOMER P.O. 50516	CUSTOMER PART 8740-.2465	QUANTITY 11,825 LBS	COILS 6	LADING NO 00116045	SHIPMENT DATE 03/11/2013							
SPECIFICATION MacFast-87246 AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spheroidize Annealed In Process Heavy Phos & Light Lube Ctd Size: .2465 +.0005 -.0005												
CERTIFICATION REQUIREMENTS												
Chemical												
C	Mn	P	S	Si	Al	Ni	Cr	Mo	Cu	V		
.41	.84	.007	.010	.24	.024	.42	.48	.22	.05	.003		
Ca	Ti	N	Sn									
.000	???????	.0091	.004									
Physical												
AMS 2301	J1	J10	J11	J12	J2	J3	J5	J4	J6	J7	J8	J9
0000	57	37	35	34	57	56	53	55	50	46	42	39
MacroClean E-381 111												
Mechanical												
TEST	UNITS		HIGH		LOW		AVERAGE					
Tensile Str	Lbs/8qin		85000		85000		85000					
RA Per Cent	Percent		74.6		74.6		74.6					
Decarb FFD	Inches		.000		.000		.000					
Surface def. depth	Inches		.000		.000		.000					
Rod / Melt Source												
Rod Source Republic	Melt Source Republic		Country of Origin USA		Nafsta Yes							
End of Certification												

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

David J. Maffei
David J. Maffei, Director of Quality Assurance


 1807 EAST 28TH ST.
 JOHNSTOWN, PA 15136-0200

 JOHNSTOWN, PA 15136
 FAX: 330-429-8555

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/29/2012 9:11:00 AM

PAGE 1 OF 2

 PURCHASE ORD: 83162
 PART NUMBER: FXT40AA-.375
 ORDER NUMBER: 1532903 - 01
 HEAT: 8192216

 PURCHASE ORDER DATE: 10/2/2013
 ACCOUNT NUMBER: 5672-1920-01
 SCHEDULE: 6752-92
 REVISION: 1

CHARGE ADDRESS

SHIP TO

 JOHNSTOWN WIRE TECHNOLOGIES
 124 LAUREL AVE
 JOHNSTOWN, PA 15906

 JOHNSTOWN WIRE TECHNOLOGIES
 EDWARD ZAPOLA
 124 LAUREL AVE
 TRUCK STOP 9 ROB DOCK
 JOHNSTOWN, PA 15904

MATERIAL DESCRIPTION

 HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RM-100 REVISION DTD 04/21/04 EXC PARA
 10.9 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RM-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS
 JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL 5 6049A & AMD 1 COND B-1 EXC MARK &
 UT WAIVED EP-AISI-8740-H FINE GRAIN VACUUM DEGAUSSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY
 RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
 SIZE: RDS .3750 DIAM X COIL
 RDS 9.5250MM DIAM X COIL

LABILE CHEMISTRY %

C	MN	P	S	SI	CU	NI	CR
0.41	0.84	0.007	0.010	0.24	0.05	0.42	0.48
V	MO	SN	AL	B	CB	N	
0.003	0.22	0.004	0.024	0.0000	0.000	0.0051	

CALCULATED TESTS

REDUCTION RATIO 1,177.6 TO 1

 AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER
 ASTM A29.

SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST

SAR J406/ASTM A255

 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
 57 57 56 55 53 50 48 42 39 37 35 34 33 32 31 31 29 29 28 28 27 27 27 27

MACRO ETCH TEST . ASTM E381/MIL STD 430

ETCHANT: HCL TEMPERATURE: 170

	S	R	C
AVG	1	1	1

MAGNETIC PARTICLE TEST

AMS 2301 AMS2304 AMS2300

	IND	AVG	IND	AVG
FREQ	0	0	0	0
PRHQ	0	0	0	0

PCE 03

FINISHED SIZE RESULTS

DECARBURIZATION TEST

SAR J419/ASTM B1077/JIS G0558

ETCHANT = NITAL MAGNIFICATION = 100X

	SPIKE	COMPLETE	TOTAL
	INCHES	INCHES	INCHES
PCE 15116	0.001	0	0.001

CAPABLE OF SEAM DEPTH 1% MAX DIAMETER NOT LESS THAN .005 MAX

 G. KRUTH
 DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

3801 EAST 28TH ST.
PHOENIX 85040-6580LAKESIDE, OH 44053
FAX: 330-638-5685

CERTIFICATE OF TESTS

REPUBLIC STEEL

11/29/2012 9:11:00 AM

PAGE 2 OF 2

PURCHASE ORD: 83162
PART NUMBER: FXT00AA-.375
ORDER NUMBER: 1512905 - 01
HEAT: 8197216PURCHASE ORDER DATE: 10/2/2012
ACCOUNT NUMBER: 5672-1920-01
SCHEDULE: 6752-92
REVISION: 1

NOTES

CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM A415, LBL10129, LBL10130, ASTM A1019, LBL10158, LBL10114, AND ASTM A1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)

ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION

MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A
MELT METHOD: EF BLOOM RED. RATIO: 1177.6

END OF DATA

CC

END OF DATA

WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA

FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA

1-814-532-5684

FILE 1 COPY

G. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

DE TRAY

Plating Works

Specialized Electro-Plating and Polishing
Nickel
Copper
Decorative Chrome
Satin Chrome
Zinc
Cadmium
Passivate
Bright Dip
Strip Copper
Descate

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail: DeTrayPlating@aol.com

June 10, 2013

Mac Fasteners
1110 East Enterprise Street
Ottawa, Kansas 66067


Subject: Certification

This is to certify that the following parts have been electrodeposited cadmium plate per Spec.-
QQ-P-416/AMS-QQ-P-416/NAS4160/AMS2400, Type II, Class 3. Please reference our
Invoice#170551 dated 6/10/2013 for:

Lot#- 65375

P.N.- MS24694S98

James T. Pierson, Vice-President



DE TRAY PLATING WORKS